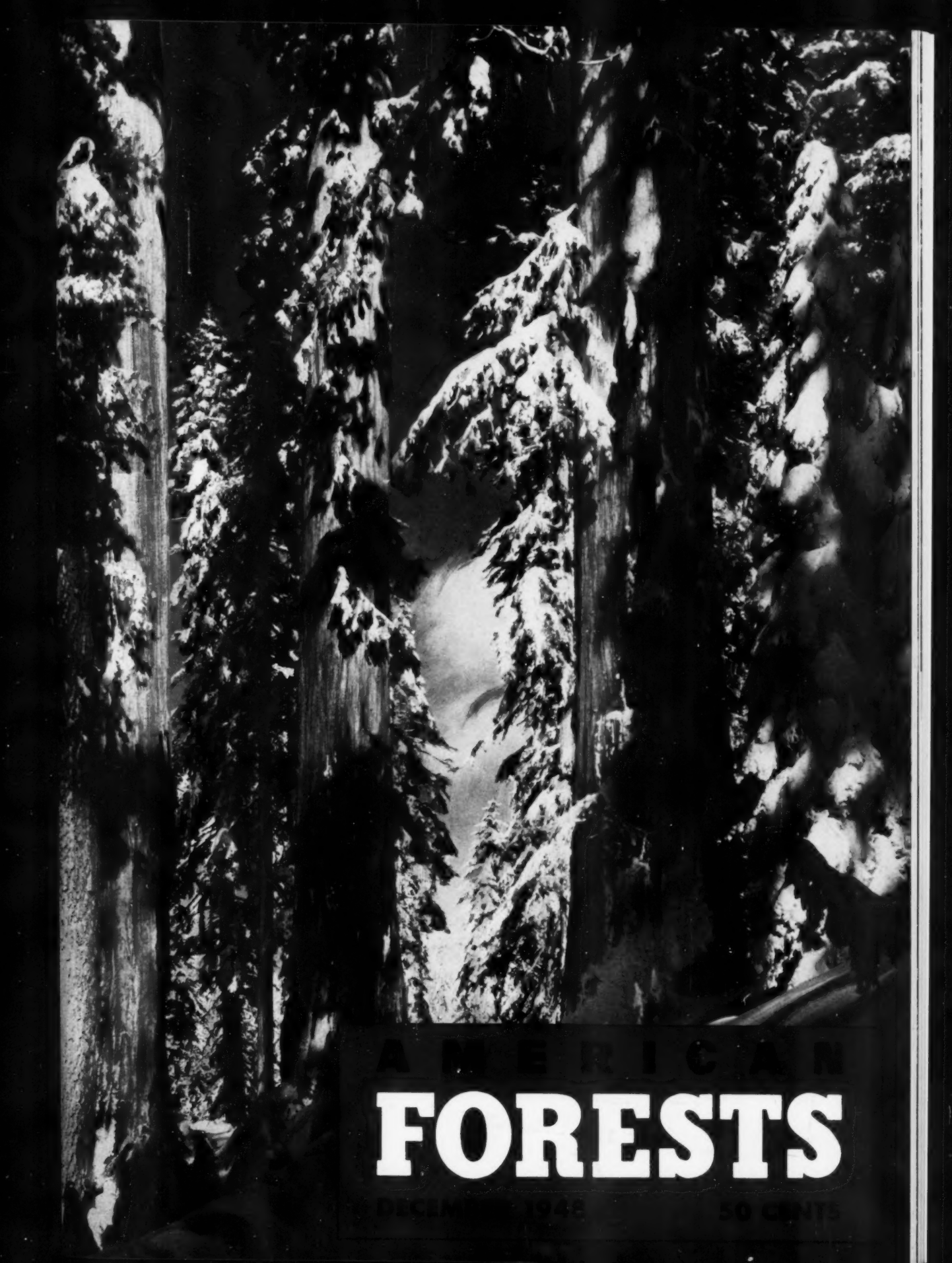
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FORESTS
DECEMBER 1948
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AMERICAN FORESTS

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COVER
"Christmas in the Sequoias"
National Park Service Photo

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Photograph by Ray Atkeson

LETTERS TO THE EDITOR

Dawn Redwood Insects

SIR: Insects gathered from the last living remnants of Dawn Redwoods (See AMERICAN FORESTS for August) —trees which flourished in much of the Northern Hemisphere fifty million years ago—are beginning to arrive in San Francisco from the Dawn Redwoods Entomological Expedition in China, sponsored by the California Academy of Sciences, jointly with Lingnan University of Canton, China.

In these shipments involving thousands of beetles and bugs may be species which will provide evidence that the Dawn Redwood is ancestral to the Coast Redwood, a species now growing only in northwestern California and southwestern Oregon.

Most insects are highly selective in their choice of food and environment. There are many insects found on our Coast Redwoods and nowhere else. Some of these eat the leaves, cones, etc., others prefer the tree as it is dying or after it is dead. In addition, there is a host of parasites and predators which specifically attack these plant-eating species. If relatives of some of these California Coast Redwood insects should turn up in these collections from the Dawn Redwood area in China, it would be a significant link between this "living fossil," and the Coast Redwoods.

It would mean that an unbroken line of successive generations of the insects would go back—both in the Chinese *Metasequoia* and in our *Sequoia sempervirens*—to the *Metasequoia* which covered the northern part of the globe as recently as twenty million years ago, and then almost disappeared.

Scientists are also interested in the fauna of the area as a whole. The Dawn Redwood valley (valley of Shui-Hsa-pa) is one of the few remaining undeforested areas of China. Growing in association with *Metasequoia* are oaks, beeches, birch, linden, rhododendron, which are found today in many other portions of the Northern Hemisphere. The insects collected from these various plants in the Dawn Redwood Valley will also be studied by scientists in an effort to determine the relationships of fauna and flora.

A collection of some 60,000 specimens is expected to result from the expedition.—*California Academy of Sciences.*

Wedded Trees

SIR: After reading Margery C. Carlson's article, "Unusual Partners," in the October issue, I was reminded of two similar though larger trees I found last year in the primeval forests of the Great Smoky Mountains National Park in Tennessee.

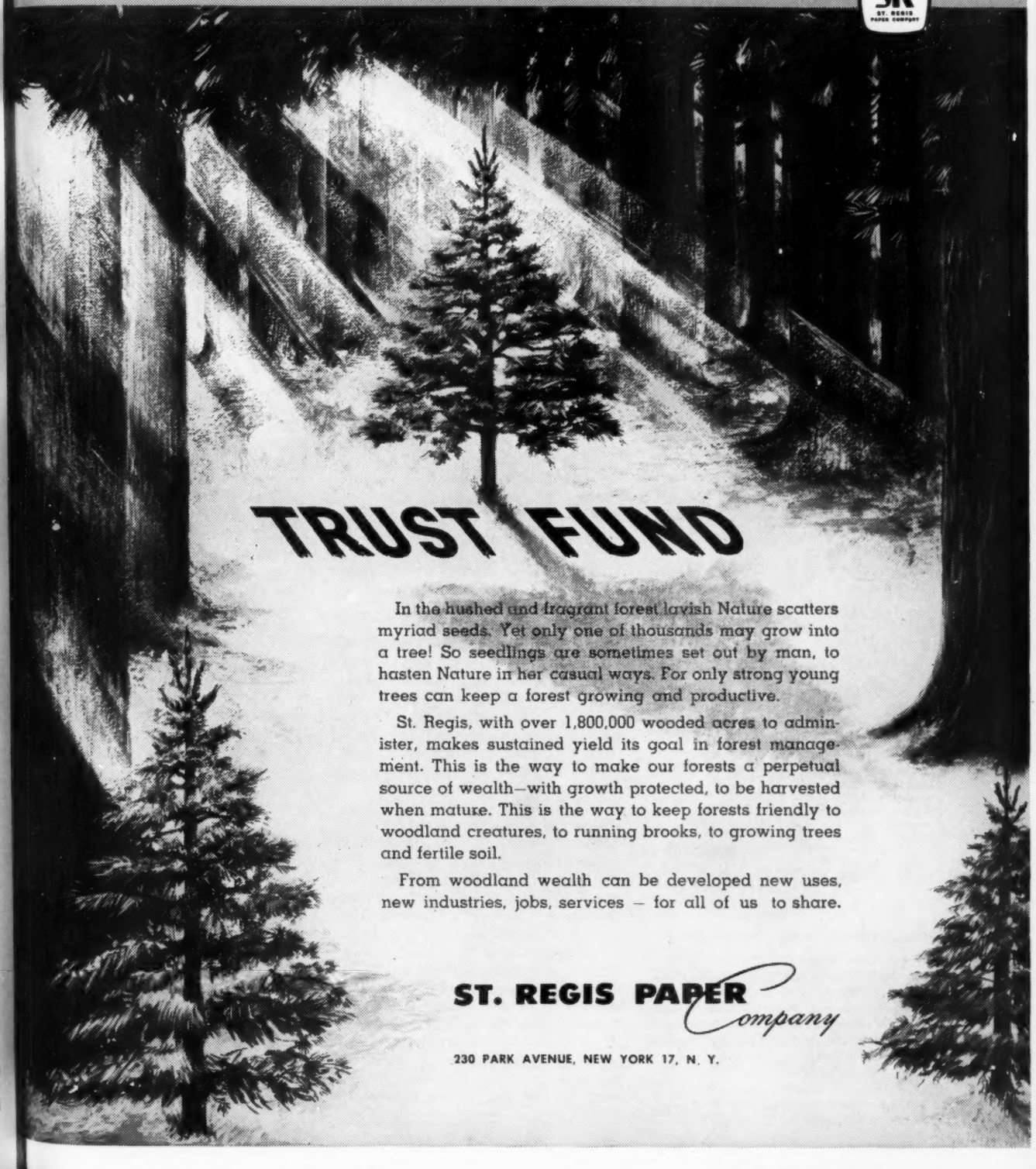
One day while Miss Niedecken of Gatlinburg, and I were following a bear trail searching for big trees to record with The American Forestry Association (the Association is compiling a list of the largest specimens of native trees), I spied what appeared to be a huge red maple. Elated at our chance for a new record, we scrambled through the rhododendron to the tree. Excitedly we put the tape around its trunk, and in the process I noticed that the light and flaky bark turned dark and became deeply ridged.

The giant hemlock-maple

"What's wrong?" I exclaimed. Miss Neidecken gave me the answer. "It's two trees!" she said. Believe it or not—the picture above will prove it —eight feet above the ground our tree divided into two huge upright limbs, one a Canadian hemlock, the other a red maple. Our amazement at finding an evergreen and deciduous tree wedded made up in part for our disappointment in not having found a record tree. We photographed this unusual phenomenon and then slowly made our way back to our bear trail

We are stewards as well as owners of forest wealth. Our goal must be that constant balance between cut and growth called sustained yield.

Roy K. Ferguson
PRESIDENT



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to again take up the hunt for big trees.

The circumference of this trunk, for truly it was one tree for eight feet, was fifteen feet, seven inches at four and one-half feet above the ground. There was no division between these trees in the first eight feet. The bark of one blended into the bark of the other without a break.—*S. Glidden Baldwin, M.D.*, Danville, Illinois.

How to Influence Voters

SIR: When we realize the amount of pressure exerted to permit exploiting of the forests and grazing lands, as exemplified by the article "The Cattlemen's Side" in the *Farm Journal* for September, and the general public apathy as shown by "Ah Wilderness—New Style" in the October issue of *Harper's*, we know there is a big fight ahead.

I have been actively interested in conservation for many years—as a city man encouraging Boy Scouts to plant trees, and as a farmer with several years on the county committee of the A.A.A. From this experience I believe that the most potent appeal to voters, most of whom are city people, is to emphasize water conservation and flood control and protection of the national forests.

AMERICAN FORESTS is read by people who know the value of conservation. If articles could be written dramatizing water conservation and flood control so that they would be published in magazines of general circulation, and in the newspapers, more voters would be influenced to support conservation-minded Congressmen.

Too many people think that science can make up in some way for lack of timber, grass and topsoil.

Of course, this approach has been and is continuing to be made, but I think efforts should be increased, even at the expense of the possibly more rational but less popular approaches.—*Albert S. Walker*, Yorba Linda, California.

COMMITTEE NOMINATES AFA OFFICERS

The election ballot, which will be mailed all members of The American Forestry Association in December, will contain the following slate of officers for 1949, as nominated by the Committee on Elections:

For President: A. C. Spurr of West Virginia, president, Monongahela Power Company.

Directors for three years: William B. Greeley, Washington, vice-president, West Coast Lumbermen's Association; Kent Leavitt, New York, president, National Association of Soil Conservation Districts; Walter H. Meyer, Connecticut, School of Forestry, Yale University; Lloyd E. Partain, Pennsylvania, manager, commercial research division, Curtis Publishing Company; Theodore S. Repplier, District of Columbia, president, The Advertising Council, Inc.

For Treasurer: John M. Christie, District of Columbia, assistant vice-president, Riggs National Bank.

For Honorary Vice-Presidents for one year: Folke Becker, Wisconsin, president, Trees For Tomorrow, Inc.; Honorable Charles F. Brannan, District of Columbia, Secretary of Agriculture; Mrs. Le Roy Clark, New Jersey, chairman, conservation committee, The Garden Club of America; Vernon L. Clark, Iowa, American Walnut Manufacturers Association; H. R. Condon, Pennsylvania, vice-president, wood preserving division, Koppers Company; Donald S. Denman, Washington, Crown Zellerbach Company; Tom De Wesse, Mississippi, president, Mississippi Forestry & Chemurgic Association; Walt Disney, California, president, Walt Disney Productions, Limited; S. G. Fontanna, Michigan, president, Association of State Foresters; M. M. Harris, Texas, editor, *San Antonio Express;* Honorable Clifford R. Hope, Kansas, Member of Congress; Miss Ethel L. Larsen, Michigan, chairman, the conservation of natural resources committee, General Federation of Women's Clubs; Cartter Patten, Tennessee, secretary-treasurer, Tennessee Timber Growers Association; Honorable Robert L. F. Sikes, Florida, Member of Congress; George R. Stewart, California, department of English, University of California; Paul E. Tilford, Ohio, secretary-treasurer, National Arborist Association, Inc.; Lewis M. Turner, Utah, Utah State Agricultural College; Honorable Roy J. Turner, Oklahoma, Governor of Oklahoma; William Vogt, District of Columbia, chief, conservation section, Pan American Union; Peter F. Watzek, Arkansas, vice-president, Crossett Lumber Company; Vertrees Young, Louisiana, vice-president, Gaylord Container Corporation.

Members of the Committee on Elections for 1949 are: Don P. Johnston of North Carolina, chairman, O. K. Quivey of Maryland, and Arthur R. Spillers of Washington, D. C.

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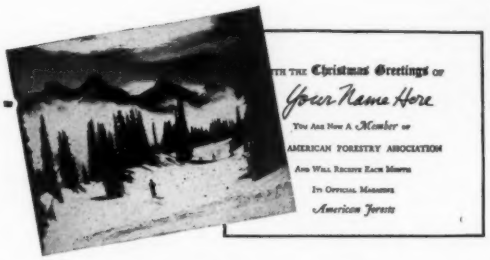

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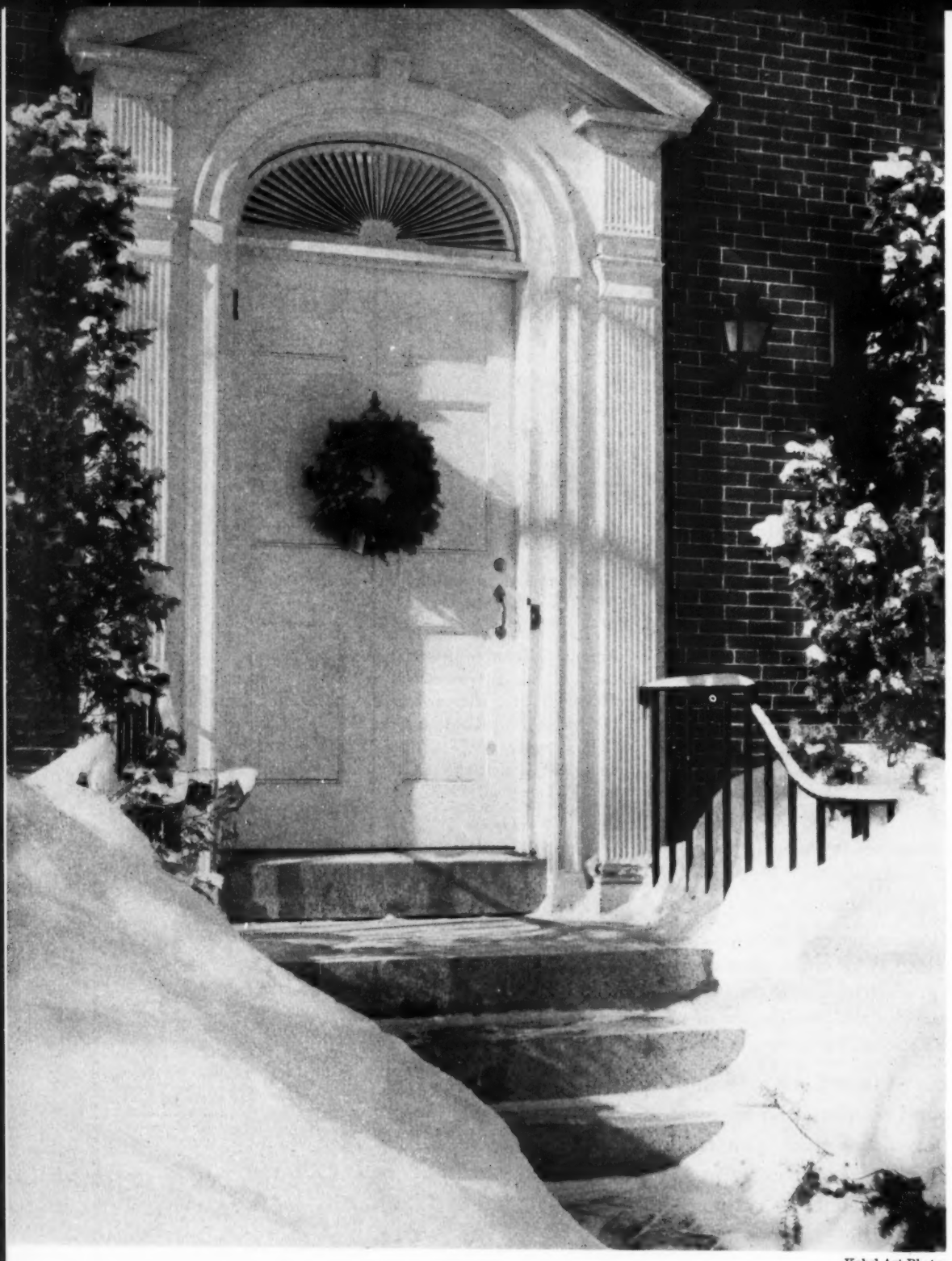


Kabel Art Photos

Merry Christmas—1948

THOUGHTS AT CHRISTMAS

The man who plants a tree becomes a partner with God in a creative act, for we cannot build trees —we can only preside at the mystery of their growth. . . .

Tree planting will bring to a state the priceless boon of beauty. If forests bring health to men's bodies, they also bring beauty to their spirits. . . .

If we make outdoor America everywhere beautiful, our efforts will bear fruit in the character of our children's children. A nation that forgets beauty will in time find even the foundations of its technical and economic achievements crumbling. . . .

A people that respects its out-of-doors and communes with its green body and gracious spirit keeps contact with the eternally young soul of nature, which helps, as nothing else can, to preserve in us the spirit of youth. . . .

Men do not revolt against a government that is making their work and their lives and their environment beautiful. A community and state and national life that stimulate and satisfy men's hunger for beauty—these are the things that turn the energies of mankind from the ruin of revolt into the radiance of creative living. . . .

But conservation is more than planting trees. . . . the conservation movement is nothing less than the guidance of American civilization in the transition from its pioneer youth of shortsighted exploitation to the productive maturity of statesmanlike development. . . .

Socially considered, the conservation movement is symbolic of the fact that, as a people, we are in a kind of twilight zone between the exploitation of the American continent and the enrichment of an American culture, using the term culture in the broad sense of the whole fabric and feel of American life. . . .

As a people, we still think with the mind of the pioneer in terms of the cash returns of a year instead of the civilization of a century. We are challenged to substitute the psychology of conservation for the psychology of conquest. We must substitute stable and scientific agriculture for an unintelligent raping of the soil. We must substitute rational forestry for reckless timber-slashing. . . .

We must learn to dress the land we have deflowered. To date, we have been little more than high-pressure salesmen of our resources. We must become high-minded statesmen of our resources. With respect to all of our natural resources we must exalt the common lot above the common loot. . . .

The conservation movement is a comprehensive challenge to all the varied forces of our commonwealths—public and private, social and scientific. . .

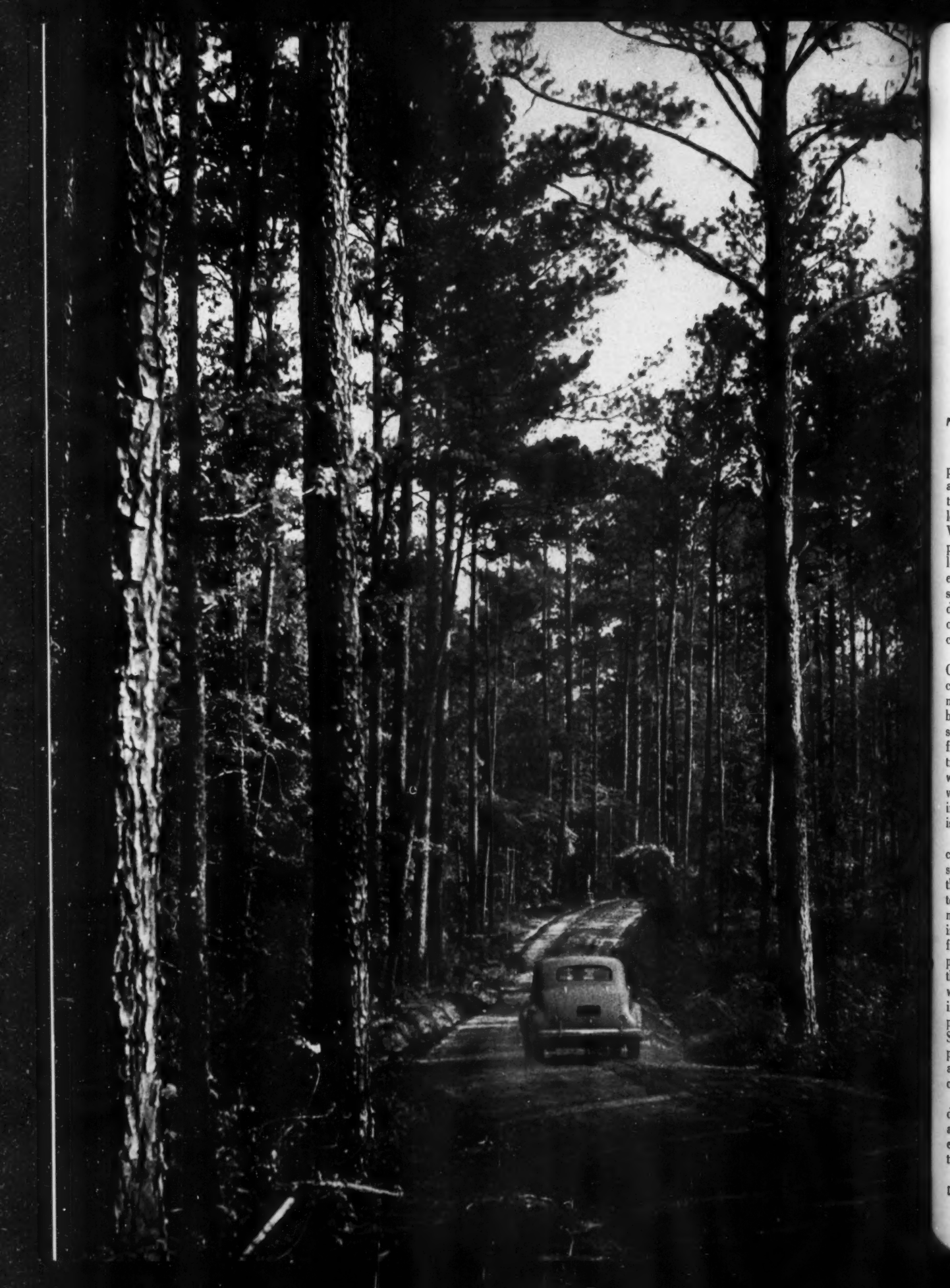
Conservation is not a venture that can be reduced to any single effort or be farmed out to any single agency. Neither leagues, nor conservation commissions, nor state legislatures, nor lumbermen, nor paper men can alone make the conservation movement the magisterial force it must be in the life of the nation. The businessman, the banker, the legislator, the scientist, the educator, all have a part to play, and the whole American public must create a compelling atmosphere of devotion to the cause of conservation that will bring every laggard into the ranks. . . .

The primary task of conservationists is to transform the millions of hand-to-mouth-day-by-day Americans into a conservation-conscious people, to create a public mind that is forest-wise. Back of the legislative and technical engineering that must enter into the administration of a conservation program there is a vast deal of spiritual engineering that must be done to insure the creation and continuance of a comprehensive and statesmanlike policy. . . .

The kind of mind upon which the conservation movement must depend for its continuing vitality must be marked by a mind that takes long views; a mind that realizes the complexity of the conservation problem; a mind that works for a cooperative leadership of the nation rather than a competing leadership *in* the nation. . . .

Conservation may well prove the acid test of the ability of American democracy to pull itself together in a vast cooperative venture. . . .

These excerpts are from "Forests and America's Future," by the late Glenn Frank, president of the University of Wisconsin, published eighteen years ago in AMERICAN FORESTS.



Putting Research To Work

By I. T. HAIG

Director, Southeastern Forest Experiment Station

Research has found the answer to many of our forest problems — but not until landowners accept timber as a crop can we expect widespread application of what we know, or will learn

THIS, truly, is the age of research. Experiment, modification and change are the keys to progress. Atomic energy, once merely a scientific dream, has become a reality. Radar, a creation that would challenge the imagination of a Jules Verne, is here and in use. Shakespeare's Prospero, using magic to follow the antics of his shipwrecked enemies, is little different from thousands of Americans now witnessing daily events by television. The magic of yesterday has literally become the commonplace of today.

Even forestry has its miracles, Cattle food from sawdust, basis for comic folk tales a few years ago, is now a technical possibility and may be a practical one before long. Rayon, sixty percent of which is produced from wood, is the outstanding contribution of the 20th century to the world's textile requirements. The development of the great kraft paper industry, founded on southern pine, is a well-known story.

In the closely related field of agriculture developments in many respects have been as far-reaching as those in nuclear physics, radar and television. While evidence of this is not quickly apparent in this day of inflated prices and shortages, it is a fact, nevertheless, that we are now producing on our farms more than three times as much per worker as we did in 1870. Human labor needed in wheat production is only fifteen percent of what it was a century ago. Since 1940 American farmers have produced yields unparalleled in past agricultural history—and with little change in acreage.

This upsurge in agricultural production is a child of research—just as developments in the field of forestry are the results of the application of research to forest problems.

Most Americans fail to realize this —are not aware of the extent to which even the broad advances in science and technology have had impact on forest problems. For example, advances in the understanding of electrical energy, remote as this field might seem, have had their effect. Foresters were among the first to apply the radio to a practical problem, forest fire control, through the development of the two-way walkie-talkie. And advances in mechanics—in power saws, tree planting machines, tractors and other woods and mill machinery—have played and will continue to play an important role in forest management and development.

In the field of chemistry, wood is now plasticized, molded, laminated, impregnated, distilled and spun into a variety of useful products. Research has also improved the usefulness of wood through better methods of seasoning and preservation. It has widened its usefulness in construction by the application of sound engineering principles as in the development of laminated beams and timber connectors, as well as in the production of such new materials as compreg, staypak, papreg, and plastics. And who can predict what new products may come out of this basic industrial material as the result of research?

It is in this field—the field of forest utilization—that the application of research is perhaps most advanced. In forest production, in timber growing and in the management of forest lands—the heart of forestry—research has made substantial, though less spectacular, progress. Or perhaps the tendency has been to underrate advances in these fields because they are not the result of brilliant original deductions, but the fruits of methodical, organized study.

The initial discoveries by which man advances are frequently made by flashes of individual genius. For example, hybrid corn would not be possible without the brilliant deductions leading to discovery of the laws of inheritance by the Austrian monk, Gregor Mendel. But neither would hybrid corn have been possible without the work of later genetists such as W. J. Beal of the Michigan Agricultural College, who made the first attempt to utilize hybrid vigor in corn breeding, or G. H. Shull of the Carnegie Institution, who was interested solely in theoretical genetics. Even the work of these men would not have been enough without the teamwork of corn breeders at many other experiment stations and in the U. S. Department of Agriculture. The genetic experiments that led to hybrid corn were completed thirty years before the work of corn breeders, at many places, made hybrid corn a production reality.

In forestry we must look for the most part to the results of organized, careful and skilled work—the slow accumulation of knowledge—rather than brilliant discoveries. And it must be recognized that forestry is a much younger and less developed art than agriculture; as pertaining to the systematic and sustained production of timber crops, it is still in its infancy, over much of the world a crude or nonexistent art. Even its industrial side, except perhaps for

pulp and paper, is technologically less mature than the chemical and electrical industries upon which science has had the greatest impact.

Silvicultural research is especially complex. There are more than 800 tree species in the United States, about 100 of commercial importance. Thus research is necessary on 100 crops while, in contrast, the crop plants in agriculture can be counted on one's fingers. Because trees are long-lived, most productive research must be carried decades rather than months or years before results are obtained. And tree crop values per acre are low and cultural and protection practices usually restricted to relatively inexpensive operations.

Yet research progress on forest production problems has made commendable progress. In forest protection, for example, research has aided materially in improving our understanding of how to detect fires quickly, how fire danger varies with fuel moisture and other key factors, and what fires may be expected to do in different types of fuel under varied circumstances. While much of this knowledge is still fragmentary, it is good enough in some forest types, combined with growing experience and American ingenuity, to have brought fire losses down to acceptable standards at reasonable costs. This is an achievement foresters may compare with advances in similar fields.

In the unique but basic field of forest influences, research work, though very new, has already appreciably advanced useful knowledge of the relationship between forests, stream flow and floods. We already know the close relationship existing between flash floods and vegetative destruction in some parts of the semi-arid West. Though research has not yet worked out all the desirable cultural practices needed to maintain vegetation and stream flow in proper balance, it is clear we cannot afford the destruction of natural vegetation in these areas without immediate replacement.

Similarly, in the better-watered East, research has made fundamental contributions to the understanding of forest hydrology—contributions now widely accepted by water engineers. To give an example, studies of shallow wells have had widespread effect in bringing out the important role of subsurface flow in forested areas. Preliminary application of research results have already been made, as in strengthening water resource management on southern national forests, and more will be done as our knowledge advances and the results of research are extended to the management of municipal and industrial watersheds.

New as we are in this field, one might wonder whether or not we are much behind agriculture. Certainly if the reputed loss of a third of our topsoil from the cultivated lands of the United States within the last few centuries is true, the indication is that agriculturists know far too little, if man is to survive, about the relationships between agronomic practice and water and erosion control.

Range reseeding offers another good example of forest research application. One of the most spectacular research contributions of recent years has resulted from studies of how to revegetate depleted range lands of the West with nutritive grasses at reasonable cost. On an estimated eighty million acres reseeding is the only hope of restoring the ranges to productivity in our lifetime. This tremendously important job, as a result of forest research, is now being done. Around four million acres have already been reseeded successfully, chiefly to crested wheatgrass, and research is now developing the techniques and selecting the plant species for additional reseeding sites. Meanwhile, grazing tests are proving the value of this program in greater beef production.

Similarly, research has helped lay the basis for forest planting—as, for instance, through improved methods of seed collection and storage, better nursery culture with resulting sturdier planting stock, improved field planting techniques and better definition of what to plant on various sites. Progress in this direction has been particularly noteworthy in the South with some of the southern pines. And recently a comprehensive series of tests was completed by the Southeastern Forest Experiment Station to guide forest planters in the Appalachian region—experiments that really began with the Biltmore plantings of Pinchot and Schenck over a half century ago.

Generally, however, research in forest planting has lagged. American foresters and forest landowners still plant run-of-the-mill trees on thousands of acres every year. In contrast, it would be difficult to find a farmer today who would plant just wheat—an average strain—rather than an improved strain, the fruit of research. Plant and animal improvement through selection and breeding have been among the most profitable activities in agricultural research. But we are not moving ahead as we should in tree breeding and hybridization.

The same thing might be said about the broad field of silviculture with all its complexities. It is true that a considerable body of knowledge exists on the seeding habits, growth and regeneration of American trees. For instance, good pathological and silvicultural research has laid the

(*Turn to page* 566)

Research is most advanced in wood utilization—but the challenge is still there. Chemically processed, this 20,000-ton sawdust pile would produce 10,000 tons of wood sugar, or a million gallons of alcohol

THE TALL TREE OF PEACE

By HENRY S. KERNAN

"I AM Dekanawideh and with the Five Nations' Confederate lords I plant the Tree of the Great Peace. I plant it in your territory, Adodarhoh, and Onondaga Nation . . .

"I name the tree the Tree of the Great Long Leaves. Under the shade of this Tree of the Great Peace we spread the soft white feathery down of the globe thistle as seats for you, Adodarhoh, and your cousin Lords.

"We place you upon those seats . . . there beneath the shade of the spreading branches of the Tree of Peace. . . .

"Roots have spread out from the Tree of the Great Peace . . . and the name of these roots is the Great White Roots of Peace. If any man of any nation outside of the Five Nations shall show a desire to obey the law of the Great Peace . . . they may trace the roots to their source . . . and they shall be welcome to take shelter beneath the Tree of the Long Leaves.

"We place at the top of the Tree of the Long Leaves an eagle who is able to see afar. If he see in the distance any evil approaching or any danger threatening he will at once warn the people of the Confederacy.

"I, Dekanawideh, and the Confederate Lords now uproot the tallest pine tree and into the cavity thereby made we cast all weapons of war. Into the depths of the earth, down into the deep underearth currents of water flowing into the unknown regions, we cast all weapons of strife. We bury them from sight forever and plant again the tree. Thus shall Great Peace be established and hostilities shall no longer be known between the Five Nations but only peace to a united people."

With these words spoken before the council fires at Onandaga Castle (now Syracuse, New York) in about the year 1450, the Iroquois hero Dekanawideh founded what he called the Kannsionni or Long House, and what history knows as the League of the Iroquois.

He must have been an extraordinary person, this Dekanawideh. The stories of his miraculous birth and of his escapes from the jealous fury of his grandmother rival those of Romulus and Hercules. The "stone" (that is, birch bark) canoe which carried him across Lake Ontario to Oswego and down the Mohawk River to Cahoes was also a marvel to these Indians whose awkward elm bark craft were proverbial. By such tales they sought to express the wonder and awe they felt before a mind so superior and a character so forceful. They came to believe that their god Tarachiawagon, "Holder of the Heavens," had sent him to bring unity and rest to their strife-ridden tribes.

At that time the Iroquois were in a sorry state quarreling among themselves and harried by their Algonquin enemies. Worst of all, they were tyrannized by the Onondaga Chief Adodarhoh, a cannibal whose scalp was covered with snakes. Symbolically, he was the Everlasting No whose destructive spirit of scorn and cynicism was, as usual, the prophet's most formidable enemy.

In the face of such opposition, Dekanawideh joined forces with the Mohawk Hiawatha, whose practical turn of mind shines through the most fantastic legends. They now offered Adodarhoh a veto over all acts of the proposed confederacy. In addition they offered him the honor of guarding the council fire in his own territory, so long as it should never be of chestnut, whose sputtering wood might disturb the chieftains in their grave deliberations. Since each nation was to have a like veto and since Onondaga, in the center of their country, was the best place for the fire, they were really making no concessions. But the tyrant was flattered, and he agreed to the constitution whose preamble is quoted above.

In choosing this noble symbol of a tree to represent his message of unity and peace, Dekanawideh was appealing to a deeply rooted awe enforced by a daily dependence upon the forest. That the fortunes of men and trees are intertwined is a basic fact which the Iroquois had grasped and had already striven to express.

Like the ancient Hebrews, they believed that man had his origin near a celestial apple tree loaded with blossoms and fruit. In a white lodge beneath sat Howenin, the Supreme Power. When his consort, the Sky Mother, wanted to see what was under the

(*Turn to page* 562)

Trees For Tomorrow

By A. G. HALL

WHEN a northern Wisconsin landowner asks Forester William A. Sylvester for several thousand spruce trees for planting on his own land, Bill is likely to turn the request down with a polite suggestion that another species be planted. He may do so even if he has the trees available. For Bill takes pride in plantations successfully established. He points out, "If we can help a landowner get started with the proper trees for the site and if his plantation succeeds this year, he'll be willing to go ahead next year at his own expense. At the same time, he is likely to become interested in good forest management as well as tree planting."

Bill is a forester for Trees for Tomorrow, Inc., at Merrill, Wisconsin. His thinking stems from the philosophy of the organization as expressed by its president, Folke Becker: "We are encouraging tree growth and forest management not only for a nearby supply of raw material, but also to protect the watershed of the Wisconsin River on which are located twenty-five reservoirs and twenty-three hydroelectric plants. Whether landowners grow pulpwood or other timber is of secondary importance so long as they make the most of their forest potentialities. What is good for the economy of the Wisconsin Valley is also good for the pulp and paper industry."

That success breeds success is evident in the Trees for Tomorrow program. In nearly five years of operation, Trees for Tomorrow, Inc. has distributed 2,500,000 trees, prepared management plans for 28,000 acres of woodland, awarded $10,000 in forestry scholarships, assisted in the establishment of twenty-seven school forests and four memorial forests. For the past three years, in cooperation with the U. S. Forest Service, it has conducted a conservation training camp, which last year provided instruction for 1,245 persons.

Trees for Tomorrow had its beginning, not at a spring tree planting event, but on a brisk autumn afternoon back in October 1943, when 100 trucks, piled high with pulpwood, slowly rolled down the main street of a northern Wisconsin paper mill town. The pulpwood roundup, the climax of a Wisconsin Valley wartime pulpwood drive, dramatized at one stroke the dollars and cents value of a local supply of raw material to farmers, who cut the

Accent on youth! Busy hands put idle Wisconsin lands to work

Tomahawk High School students march to dedicate their 560-acre school forest where they planted 15,000 trees. Trees for Tomorrow has helped develop twenty-seven such school training areas

wood, and to northern Wisconsin communities which are dependent upon a steady flow of forest products. It also crystallized opinion among paper mill officials who decided that if, through coordinated effort, the same enthusiasm that had been aroused for cutting trees could be directed to tree planting, a vast reservoir of wood could be built to the mutual benefit of all.

At the conclusion of the pulpwood drive, the committee suggested that M. N. Taylor, a Merrill newspaperman, work out a plan for providing service to landowners who, without outside assistance might be unable to improve their woodlands.

Nine paper mills (later ten) in the Wisconsin Valley offered to back the program for a five-year period. That was in February 1944. Today these mills have a program on which they and the people of Wisconsin are completely sold. It operates in only seven counties, but within those counties it is slowly and persistently changing the attitude of small landowners from one of hopelessness to business-like action and planning.

The paper-making industry, the third largest income producer in the state, must import a large percentage of its raw material from outside Wisconsin's borders, while some seventeen million acres of forest land, if properly managed, could almost meet the needs. Consequently, industry readily supports the Trees for Tomorrow program, each member mill helping to finance it by an assessment based on the amount of wood and wood pulp consumed.

How does the program work? It is essentially one of education and on-the-ground assistance. When Taylor set up his office in Merrill, he was armed only with a blueprint and overflowing enthusiasm backed by industry dollars. The first year was spent in research. The second year he hired a forester. He now has two full-time foresters. Other foresters from public agencies and industry and representatives from the State Department of Public Instruction and the University of Wisconsin, assist at the conservation training camp during the summer months.

Newspaper and radio publicity, following up on the wartime pulpwood drive, helped develop initial interest in tree planting and fire protection, but now the program is selling itself faster than Taylor and his small staff can keep up with the demand.

Trees are distributed free to landowners within the seven counties. They are purchased by Trees for Tomorrow from the state nurseries and are obtained also from nurseries operated by member mills. When a landowner requests trees, a staff forester consults his maps to learn the topography, the type of soil, existing vegetative types and other information he needs for an intelligent appraisal of the planting possibilities. Often he visits the site, or if this cannot be done he calls upon one of the twenty-five foresters employed by the member mills. These men work essentially on company-owned lands, but under the Trees for Tomorrow program they are available on call to assist in any way.

After the land has been appraised as a planting site, trees are delivered in trucks furnished by member mills and—what is more important—a forester is there to help the landowner with his first plantings. Next year Trees for Tomorrow foresters want to be in a position to encourage the landowner to buy and plant his own trees. This year, therefore, they are planting more than seedlings—they hope to plant the seeds of success.

State and federal nurseries have been most cooperative in the tree planting projects, as have the nurserymen of the pulp mills who, since

Now in its fifth year, a vigorous program of education and on-the-ground assistance to landowners is bringing productive forests back to this once great timber-producing state

the early 1930's, have planted thirty-three million trees on company lands.

Much of Wisconsin's forest land is now covered with second-growth timber of varying degrees of value. Some of it is ready for harvest; other areas need improvement. It is on these lands that Trees for Tomorrow has been placing increasing emphasis. For 28,000 acres of such land, simple management plans have been drawn up and are being applied by the landowners. They are being followed because they are easy to follow. In this activity, Trees for Tomorrow foresters again do an on-the-ground job, and again they call in the company foresters whenever necessary.

Once the forester visits the land, maps the area, draws up and explains the management plan, the owner is well on his way to better forest management.

A sample plan is that prepared for a mink farmer at Phillips. Five brown areas on the map indicate aspen stands with understories of hard maple. Two green areas show the location of northern hardwoods, two gray areas indicate productive swamp, a dotted area is shown as white birch. In addition are open areas and a clearly marked non-productive marsh.

The typewritten plan advises the landowner to remove all the aspen after it reaches eight inches in diameter, otherwise heart rot will destroy its value. This will result in a conversion of the thirty-five acres to hard maple. The plan points out that the eight acres of northern hardwood are now producing at the rate of 1200 board feet a year, and recommends that not more than this amount be removed annually.

The thirty acres of productive swamp contain balsam fir which should be removed after it reaches eight inches in diameter. Other species should be carefully selected so as not to produce large openings in the swamp. Such openings, the plan warns, will invite invasion of swamp brush. It recommends that the four acres of white birch remain untouched at present—looking to a harvest in twenty years. Field and pasture lands, now unused for agriculture, are indicated as being desirable tree planting sites—white spruce and balsam fir on the lower lands, Norway and white pine on the high land.

While the simplicity of the plan necessarily means that many of the finer details of management and silviculture are not included, the recommended measures are important steps in the right direction. Without a plan the owner probably would have done nothing or, what is worse, would have hacked away at his woodland with no thought for future crops of timber.

But the work of Trees for Tomorrow does not stop with the making of a management plan. This is just the first step. The staff foresters revisit the managed areas from time to time and improve on their recommendations, keeping pace with the landowner's ability and interest.

As a means of stimulating interest among the next generation of woodland owners, Trees for Tomorrow has established five annual scholarships of $500 each to help defray expenses of Wisconsin boys who wish to take formal education in forestry. Students selected with the help of school officials may go to any forestry school in the country. Many are employed with one of the member mills during the summer months. The boys, however, are under no obligation to work for the member mills upon graduation.

Wisconsin has long been known as a leader in the establishment of school forests. These are operated as training media for rural youth and often produce a profit from forest products. Fred B. Trenk, extension forester, and the state department of conservation have shared honors in stimulating this activity. Trees for Tomorrow helps promote and service these school units. So far, it has reached out to twenty-seven schools within its seven-county area and has assisted in planting programs and in the development of management plans.

Trees for Tomorrow cooperates actively with all agencies within the state. As a private organization it is often able to assist the progress of federal and state programs and activities in a manner which would not be possible for a public agency.

An excellent example of such service is the part played by Trees for Tomorrow in the 1948 state cone collection campaign when a revolving fund of $20,000 was set up to initiate cash payments to cone collectors. Trees for Tomorrow also published a folder on how to pick cones and awarded cash prizes for 4-H Club demonstration booths at county fairs. The response to this plan was overwhelming. It resulted in a $50,000 cone crop and an increase of 2,580 percent over the 1947 collection of urgently needed Norway pine species. Over 8,345 bushels of cones were collected in 1948 as compared to 437 bushels in 1947.

Another example of service is that performed by Trees for Tomorrow at the Eagle River Conservation Camp.

Eagle River Camp originally was

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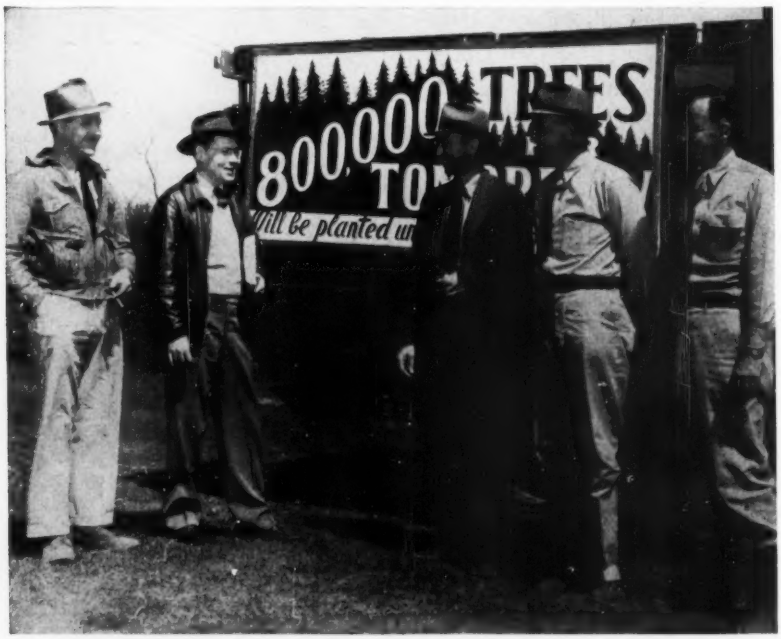

Cooperation does it. W. W. Kluender, Chicago Northwestern Railway; M. N. Taylor; Donald Ball of Nicolet National Forest; W. A. Sylvester; and Ted Kauppinen, Rhinelander Paper Company, launch a planting season

WHY WE DECORATE CHRISTMAS TREES

No one, of course, can say for sure—but researchers, probing into religion and folklore, legend and mythology, have uncovered a wealth of fascinating background

By HARRY WILLIAM DENGLER

FOR years researchers have been attempting to solve the riddle of the Christmas tree—to discover when and where the delightful custom of decorating a tree at Yuletide began. Their studies have led deep into religion, into mythology and folklore, legend and myth, superstition and paganism. What they have found only deepens the mystery. Yet they have given the world a wealth of material to conjure with—a fascinating if undocumented background to the Christmas tree ceremony.

Until recently, it was generally accepted, on the basis of existing records, that the custom dates from 1604 at Strassburg, Germany, that it was introduced into France and England around 1840 and emigrated to America in 1847. New light on this old mystery, however, has caused researchers to revise their records. There is authentic evidence, for example, of a Christmas tree at Philadelphia in 1834 (see AMERICAN FORESTS for December 1945)—and an interesting possibility that a spruce was cut at old Fort Dearborn during the Christmas celebration of 1804.

In England, there is now evidence that as early as 1444, in preparation for the Christmas celebration, the streets, churches and houses of London were bedecked with evergreen, oak, ivy and bay and, on at least one site, a "standard of tree, being set up in the midst of pavement, nailed full of holme and ivie, for disport at Christmas."

On the side of legend, many researchers point to Saint Boniface, English missionary to Germany in the eighth century. According to one version, the missionary approached an oak which had long been the object of pagan worship and, with lusty strokes of his ax, sent it crashing to earth. Then to onlookers, amazed that no harm had come to him, he called attention to a tiny fir at his feet.

"This little tree," he told them, "shall be your holy tree. It is the wood of peace, for your homes are built of the fir. It is the sign of an endless life, for its leaves are ever green. See how it points upward to Heaven? Let this be called the tree of the Christ Child—gather about it, not in the wild woods but in your own homes. There it will shelter no deeds of blood (human and animal sacrifices to pagan deities), but loving gifts and rites of kindness."

Some researchers credit a Saint Wilfrid of England with a somewhat similar version of the origin of the Christmas tree. Others, however, claim that Boniface and Wilfrid were one and the same, while still another theory is that Wilfrid was a pupil of Boniface and merely advanced his teachings.

From the Vikings comes the legend that the Lord, in the ninth century, dispatched his emissaries, Faith, Hope and Charity, earthward to select the first Christmas tree. Tradition has it that they chose the balsam fir because it bore many crosses on every twig and branch, was high as hope and as wide as love.

Still another legend, found in French and German folklore, credits Bonchevalier with the discovery of the first Christmas tree. Walking through the forest one Christmas eve, he beheld a tall evergreen, brilliantly aglow with shimmering candlelight and crowned with an iridescent halo. His mother later interpreted this phenomenon by stating that Bonchevalier had seen the "Tree of Humanity" and that the candles represented the people all over the world, while the halo at the tree's crest was the Christ Child watching over all.

There is a similar story about Martin Luther. On a cold, clear night at Christmas he became enchanted with the sparkle of the stars and the glistening reflection of moonbeams on snow-flecked evergreens. He cut a small tree, carried it home and set it up on a table. Then, to the delight of his young children, he covered it with numerous small, lighted candles to simulate the beautiful sights he had witnessed earlier in the forest. This is said to have been around 1550.

The Scandinavians have been credited by some researchers, delving into mythology, as having originated the Christmas tree. They base their reasoning on the early Christmas practice in that region of Europe of erecting poles, on which were hung sheaves of grain, as a Christmas gift to the birds.

Others contend that the first Christmas trees were fruit trees—that they were potted months before Christmas

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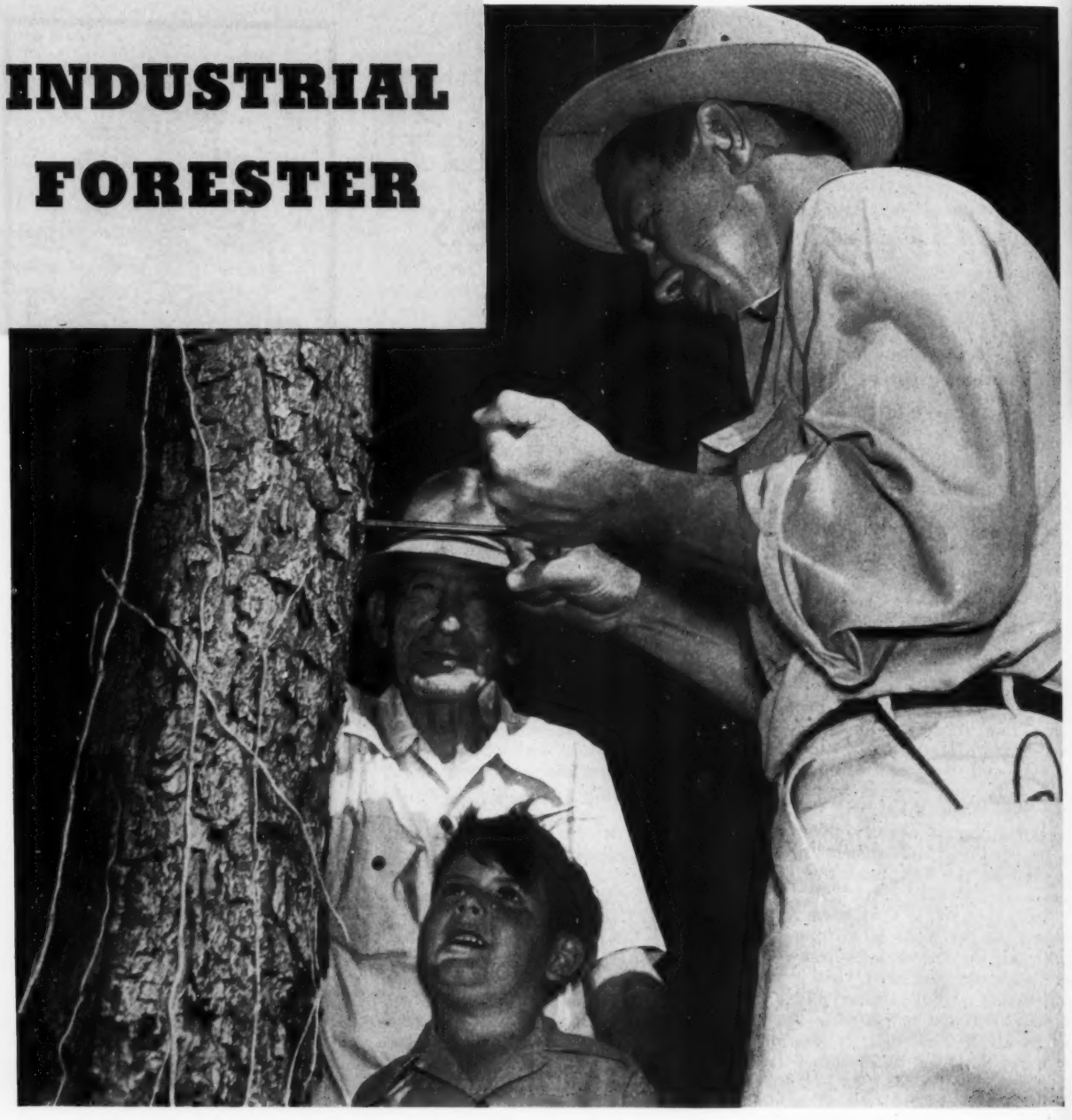
INDUSTRIAL FORESTER



How one wood-using industry is working toward a more stable and more profitable wood crop in the South

BOB Nonnemacher, conservation engineer of the Southern Kraft Division of International Paper Company, is one of a growing staff employed by southern wood-using industries to help educate landowners in good forestry practices, to mold public opinion toward protection and wise use of the forest resource, and to assist in developing plans to assure a present and future supply of pulpwood on company lands.

In 1947, more than 2,800,000 cords of pulpwood were delivered to the eight southern mills of International. For this, farmers, wood dealers and others were paid $29,635,655. Around 22,000 men and women were provided employment in pulpwood harvest and delivery. Only 169,604 cords of the total were obtained from company-owned lands. Thus it is clear that Bob Nonnemacher and other industrial foresters have their greatest work to do among thousands of landowners and other citizens of the South.

Bob's territory is Mississippi. Similar work is being carried on by International in Alabama, Florida, Georgia, Louisiana, Noth Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia. On this and the opposite page Bob is seen in action.

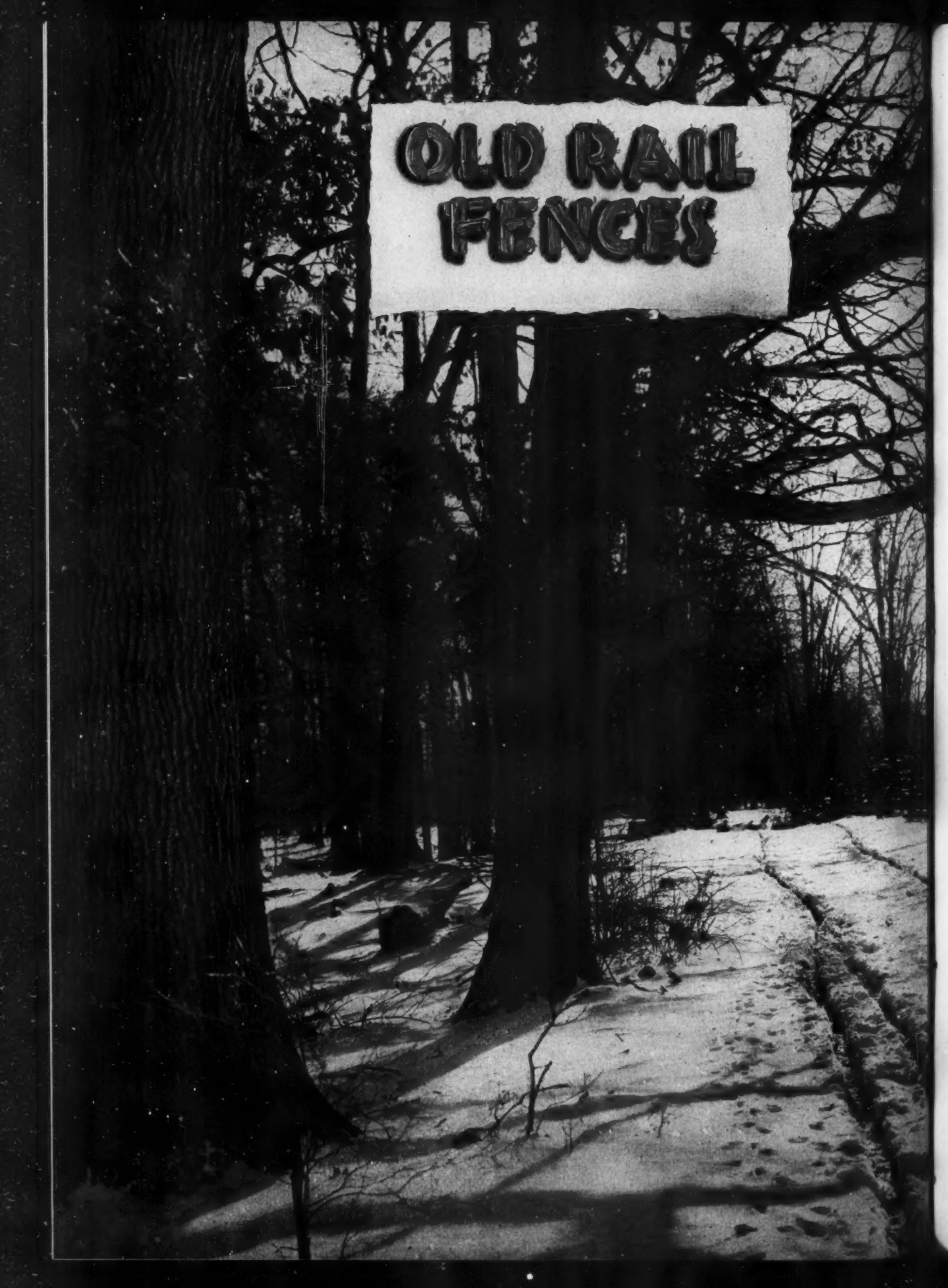
Above—Bob explains to the Canton Lion's Club why forest management is important to all businessmen interested in southern economy

Left—A cotton broker is shown how to take borings to learn when his trees should be cut. His grandson, too, has a stake in the woodland

Right—Inspection of pulpwood at the mill is one of his duties

Lower right—New fire equipment is demonstrated to Mississippi high school boys — future fire fighters

Below—Trees started now for erosion control will yield a cash crop for this boy in about two decades


OLD RAIL
FENCES

There's something neighborly about a rail fence—a boundary, not a barrier, "twixt mine and thine"

By JANE CARTER

WHEN the last green and gold and scarlet of autumn settles to a rusty blanket over the land, the post and rail fences that partition the fertile acres of my native Pennsylvania stand out in limitless crisscross pattern. Half-hidden all summer by trailing vine and high growth, their clean pewter-gray lines now reaffirm a kinship with and a defense of the soil from which they sprung.

As in all original settlement, where fencing must be constructed from local boulders, mud, or plants, these products of Penn's Woods marked in colonial times the first boundaries "twixt mine and thine." Several centuries later they continue to do so.

As a young child, I learned through association with mournful-faced Tom Hatch, best post and rail splitter in the township, how to read the saga of past years within a few panels of fence line. Two roadside fence posts split from the top record that heavy snow drifts forced traffic through the field for a time. A sharp crack with the emergency shovel prudent countrymen carry in winter had rent the frozen posts and permitted removal of their rails. Since then the damage has been repaired with a firmly nailed horseshoe under each rail slot.

A trace of spring floods still remains in the tight mud ball inside the lowest hole, and tufts of wool indicate that the flock once passed this way. Clumps of green, spade-shaped leaves are reminders that April's first and largest violets are usually found in the warm lee of a fence post, as the fence's shade later encourages a quick rich growth of clover and errant asparagus plumes. Now they have joined the dusty, warm-smelling ranks of all of summer's departed—crumbling brown pods and flower ghosts as fragile as the treasures from an Egyptian tomb.

Small tunnels in a nearby post may have sheltered a brood of leaf cutter bees, whose grubs are cradled like fairy babies in rose and other flower petals. Or perhaps the tiny holes supplied insect food and stray seeds to the birds. In a corner of a field, where the fallow earth is covered with rotting walnut shells, a frayed hitching rope reveals where the team was tied each noon-day.

Probably neither man nor beast suspected that only a few feet away a swarm of yellow jackets pursued a busy life cycle. Half-buried in the ground their abandoned nest is found. Its papery shingles and layers of comb match, not surprisingly, the burnished gray fence, for hundreds of well masticated splinters made the pulp from which the nest was constructed. In a hollow post is another deserted home, the soft grass cushion of a family of bluebirds. Only the remains of one pale eggshell is seen. The rest of the hatched clutch was pushed out onto the ground to some day add its miniscule measure of calcium to earth's eternal sponge. A fuzzy brown caterpillar creeps along the middle rail, seeking haven against the cold.

In my Pennsylvania village, the steady clop of the woodman's ax could be heard every fine day in late autumn or winter. If Tom Hatch was not working down in our grove, some neighbor was sure to be busy in a back woodlot and his echo knocked across the fields.

Tom was getting old and a little blind when I first knew him. Yet despite the stoop in his slight frame, the lightning surety of his long arms outrivaled even the blacksmith. Clad in a battered hat, multiple-patched pants, a faded, but always clean, blue shirt and an old cardigan sweater of that strange mixed yarn favored for small boys' corduroys, he could be seen early in the morning walking up the back lane. Hastily gulping our oatmeal, we children would pile out to watch him pick up his work where he had left it the evening before.

Perhaps he had already felled and sawed into eleven-foot logs the hickory used in rail making. With clanging blows he would drive in his wedges, then place the split timber upon low sleepers, securing them with a long hook known as a dog. Several quick slashes with his broad ax completed the job and another rail, its ends neatly tapered, joined the finished pile. But post-making, and particularly the hole-boring part of it, most interested us children.

Chestnut was still available in those days and Tom would spend most of a forenoon building up a supply of heavy, six and a half-foot trimmed posts, their tops expertly slanted to shed water. After a short respite at mid-day and a replenishment of his ever-present quid of tobacco from the

H. Armstrong Roberts

The top rung of a rail fence has served as a convenient perch for many a boy surveying new horizons

paper bag in his pocket, the work would enter its final phase.

Almost hypnotized with interest, we children would watch him slide the posts, one by one, into the horizontal frame of the post-borer. As he wound the long handle of the auger, the bit screeched greedily into the wood and fragrant semi-circular chips flew onto a mounting heap. The work gathered speed as the bit moved from one finished double hole to its next position, boring six holes in all for a three-rail post. Sliding the post off the frame Tom would then hack out the short portions between the holes with a couple of licks of his narrow mortising ax and stack the post to dry. By evening he might often have finished forty to forty-five posts; of rails, the daily average was around sixty.

For these prodigious labors Tom Hatch was paid about two dollars and a half a day. His rests were few—an occasional trip to the spring, where, following him, we would watch him bury his gray moustache ends in the tin cup, or make an infrequent stop to wipe the tobacco juice from his mouth with the back of a gnarled hand. Yet the woodchopper had another side, too. Tom played the violin.

Sitting in the evenings on the steps of his cabin near the school, he distilled sweet melody into the air. Darling Nelly Gray, Camptown Races, Old Black Joe. Years later I had an opportunity to see their scores. In his youth, before the joints of his hands had stiffened to the curve of the ax handle and the vision of his dark eyes was still keen, Tom had painstakingly traced his tunes between the thick, marbelized covers of an old copy-book. "Songs for the Violin. Tom Hatch, 1879" read the inscription on the fly-leaf.

For several years after his failing sight forced him to give up his work and before necessity led him to the county home down the road, Tom continued to play his songs by memory. He was proud of his past trade and from memory, too, would still quote the passage from Isaiah where a man had acquired a vineyard, "And he *fenced* it, and gathered out the stones thereof, and planted it with choicest vine." While in another chapter he declared that the Israelites were told to go conquer "the cities great and *fenced* up to heaven."

I like to remember Tom Hatch sitting in the springtime, the wild plum tree by his cabin door a luminous pink cloud over his head, chasing loneliness with his fiddle, through which a mouse had once gnawed a hole as neat as any his auger ever bit. Yet this pointing of his knotted finger back to Biblical fencing was never quite forgotten.

From the first wandering tribesman who barricaded his herd and family against wild beasts, we come to the primitive husbandman who surrounds the land into which he has put several years' labor with the tree markings or crude stakes asserting ownership and hereditary right. After this the record builds up quickly. To disturb a Chaldean boundary mark was to incur the wrath of the gods, while Moses and Solon both warned of the inviolability of fenced property. By the time of Ovid a nobleman might require oblations made to his landmarks.

In the paintings of the Dutch and other post-Renaissance masters, a form of the post and rail fence and the portable wattle fence appeared. These latter basket-like enclosures apparently developed wherever timber was scarce and were revived again in the settling of our own West, where willow branches were woven about stakes. Occasional tapestries of feudal days depict the wicker enclosures around an apiary or small garden. In England, the cottagers on the great manors were allowed to enclose their fowl runs for as far as the cottager's wife could "throwe a stone."

Around this time the word fence, founded on the Latin *defendere*, to

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The crisscross pattern of a Virginia split rail fence

Eleanor Fisher

Give Me A Slow Hound . . .

By HARRY BOTSFORD

THE happiest combination I can think of is a stretch of rabbit country, a few inches of snow, a slow hound and plenty of rabbits.

A slow hound? For me, every time! The slow hound, I have found, not only is a productive dog but usually is in good voice. And that is very important. John Charles Thomas may have an elegant voice; certainly I go along with the popular thesis that Hildegard's voice is entrancing. But for real music, the stuff that chases chills up and down the spine, give me the mellow bellow of a slow hound hot on the trail of a rabbit—and particularly a rabbit possessed with the idea that he is making a monkey out of the hound.

There, gentlemen, is real and uplifting music! Standing on a stump or at the edge of a clearing you hear that bugle grow nearer and nearer. Then you sort of sense which way Brer Rabbit is circling and get yourself in a strategic position to await his appearance.

If the hound is fast, your rabbit slithers along like a gray ghost. He's headed for the security of his home hole. If you have the opportunity, you will take a quick shot—and usually miss. But things are different with a slow hound.

Brer Rabbit hops along leisurely, pausing now and then to cock a listening ear at the voice of the hound. He's in no hurry. He's having fun—and he likes the feel of the fresh snow and the looks of things. You draw a bead on him and he passes from this vale of tears before he realizes the error of his ways.

Yes, me for the slow hound! That's why I like to spend a November weekend at Jeffrey's cabin. A cozy affair, the cabin is ten miles from the nearest town and located in what was once a good farming country, now largely gone to seed. The landscape is a bit on the desolate side—but it's tremendously fine cover for rabbits.

We pack a generous supply of groceries in the car on Friday afternoon and old Sandy, Jeff's liver-spotted hound, crawls up on the back seat and goes to sleep. Before we leave the concrete highway we put on the chains, for as a rule we need them to crawl over a narrow, rutted dirt road before turning off and low-gearing it through the lane that leads to the cabin. The cabin is slab-sided, set in a grove of maples and pines. It's small but comfortable.

While one of us carries in the groceries, the other builds a fire. In half an hour we are settled. The cabin is warm and cozy, the kitchen stove is fired up, the blankets are spread on the bunks and old Sandy is stretched on his side in front of the fireplace, snoring lustily. We cook supper and eat. There may be better food than we prepare, but we will vigorously deny it. We fry Lake Erie pike to a crusty brownness; there is a liberal quantity of creamy mashed potatoes and stewed tomatoes and a berry pie our ladies have prepared for us. We drink our last cup of coffee and start planning for the morrow. The sky is overcast but it's fairly warm. Four inches of snow are on the ground.

It's dark when we roll out the following morning and start the fire. Dark and cold. But we sit down to an enormous breakfast of cornmeal pancakes, Canadian bacon and coffee. After this we make sandwiches, pour scalding hot coffee in thermos bottles and we are ready to take off. But not before we feed Sandy—just enough to sustain him for the active day ahead. It didn't snow during the night, for which we are grateful.

In the life of every hunter there's at least one dog. More often than not, it's a hound like Sandy. That's because there are more rabbit hunters than bird hunters.

Sometimes we remember a certain hound with real affection—there are some we recall with a feeling of revulsion and utter dislike. Hounds are like that.

The ones we remember pleasantly are often without special distinction as to character. To ascribe to any hound the virtues of super intelligence is to go out on a limb. Only a few exhibit real sagacity. Courage? That's something different—but it is evident only when the hound is pitted against big game, such as bear or mountain lions. Pit the average rabbit hound against a shrewd, whimsical fox and what happens will usually leave the hound confused.

But the rabbit is an outright animal. He isn't blessed with too much in the way of guile. The hound knows the rabbit won't do certain things. He's a dependable prey. He won't maliciously wade through a stream and conceal his trail as will a smart and conniving fox. He won't climb a tree as does a coon. Above all, the hound has complete confidence that if the rabbit is cornered, it won't turn and use teeth and claws in an

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John Charles Thomas may have an elegant voice but for real music give this writer the mellow bellow of a slow hound hot on the trail of a fast rabbit. That, in his judgment, is really uplifting music.

FIRE CONTROL-CITIZEN STYLE

By NORT BASER

SAY you are driving through Texas along U. S. Highway 79 between Austin and Shreveport, Louisiana, listening to the radio in your car.

You slacken speed for Palestine, listed in the tourist guide as a busy town of 20,000 people, and decide to stop for a mid-afternoon cup of coffee.

Just as you pull into a parking space a siren wails. Then another. Is it a fire, ambulance, police?

Racing toward you up the street comes a red jeep. It has a siren on it, and it's screeching. Another swings off a side street and joins the chase. As they tear by, you make out this lettering on the front of each: "Forest Fire Patrol."

The musical program on your radio is suddenly interrupted. The announcer breaks in with: "Attention, all volunteers of the Palestine Forest Fire Brigade. A forest and range fire has been reported on Sycamore Road one-and-a-half miles south of the city limits. At least twenty volunteers are needed."

Across the street a man dashes out of a laundry and climbs into his car. He calls to an approaching customer, "My wife will take your laundry, Fred. I'm going to the fire."

From the window of a dentist's office on the second floor a man yells, "Wait for me!"

You see other cars pulling away from the curbs and heading in the direction of the vanishing jeeps.

The scene just witnessed was the Palestine Volunteer Forest Fire Brigade swinging into action—an example of community spirit and pride, of local citizens helping each other and, incidentally, themselves.

Let's get the driver of that first jeep to tell more about the brigade. He is Leslie Reagan, rancher and dealer in oil properties. One of the organizers of the brigade, he served as its first chief until the Texas wing of the Civil Air Patrol named him its forest group commander. Then he turned the chief's job over to Ernest Eilenberger, service station operator.

"Of course, you couldn't expect everybody in a town of 20,000 to be in the act," Reagan says. "But you would be amazed at how many are. Most active of the forty-two men in the key organization are two dentists, a laundryman, a service station operator, two wholesale oil distributors, three insurance salesmen, a machine shop owner, a food distributor and two variety store proprietors.

"The Palestine fire and police departments cooperate, and so does the local radio station KNET. We also get plenty of help from the chamber of commerce, civic clubs and the Texas Forest Service. And don't forget our wives. They have been great. My wife, Billie, serves as dispatcher, day or night.

"The whole town is behind us. You'll note I mentioned forty-two men in our key organization, but plenty more volunteer when we have a big fire. For instance, a report on a big fire came through at 9:30 one morning. The radio station spread the word and, when I got on the highway, I ran into a traffic jam. More than 100 fire fighters responded."

You also learn that 135 volunteers spent a total of 1,680 man hours fighting a stubborn 1,100-acre fire last spring in woodland adjoining the Texas Dogwood Trails.

In fact, the very organization of the brigade was inspired by an almost disastrous fire in the heart of these Dogwood Trails on a March night in 1947. Thousands of people drive from miles around each spring to see the dogwoods in bloom, and the people of Palestine shuddered when they realized how close they came to losing this prized community asset.

Civic-minded citizens, led by Harold Bodley, chamber of commerce manager, and Leslie Reagan, wasted no time in laying plans to form a volunteer fire-fighting unit. They

Radio Announcer Marvin Crain reports a forest fire over Station KNET

Hitting fires promptly is one key to the success of the Palestine Forest Fire Brigade. Leaders of the volunteer organization are shown above including Commander Leslie Reagan, second from right

asked the local newspaper and radio station to announce an organizational meeting. Twenty-seven citizens responded, organized and elected officers. A week later this number had swelled to forty-two—and they have been on call ever since.

It should be stated that the key men of the brigade were formerly active in the Texas National Guard, which explains the manner in which they set up their fire-fighting organization. They have a chief as their leader, under him an assistant chief.

Next in rank are two battalion chiefs, each directing two companies. Each of the four companies is headed by a captain and consists of an axman, six hoe men and a broom man.

There is also a captain in charge of sound and light (he has a panel truck equipped with radio, public address system and flood lights). There's even a lieutenant in charge of first aid.

As the organization's first chief, Reagan donated the first piece of equipment—a 1939 Dodge sedan which he outfitted with a three-gallon garden spray, axes, lawn and sweeping brooms. In case of alarm, other members grabbed up sacks, brooms and any other tools at hand and went to the scene in their own cars.

A recent inventory of equipment revealed seven jeeps, two of them rigged with sirens and protective grilling, the panel sound and light truck, eight five-gallon pack pumps (each capable of knocking out 200 yards of ground fire), plus a good supply of axes, shovels, hoe rakes, brooms and council tools. The city donated twenty-eight of the latter.

This past year the Texas wing of the Civil Air Patrol took special recognition of the Palestine brigade. Reagan was singled out to serve as CAP forest group commander, and as a result the brigade now has at its command an L-4 airplane for patrol duty. In addition it has a GMC truck and crash trailer, which is being rigged up with a 900-gallon water tank and 250-pound pressure pump, two-way mobile radio units for jeeps and plane, plus walkie-talkies.

Other than the equipment obtained through the CAP and local organizations, the men of the brigade have dug into their own pockets to get the tools they need.

When the brigade was first formed, three priority areas of protection were outlined. The first, of course, was the Texas Dogwood Trails which comprise 450 acres two miles north of the city limits. A fire in that area is heralded by a blast on the steam siren at the railroad shop roundhouse.

Second was the Palestine Community Forest northwest of the city. Its 900 acres contain beautiful slash pine plantations and four lakes, making it the largest community forest in Texas.

Third on the list was the Methodist Encampment southwest of the city.

Then the brigade went a step further and defined its protective area as thirty-six square miles—or more accurately, any fire within six miles of the city limits.

Actually, the Palestine brigade doesn't pay much attention to these boundaries. It will fight fires whenever asked, no matter where they occur. Last August, for instance, the Texas Forest Service had more fires than it could control in the Conroe area 115 miles to the south. Reagan and four volunteers took two pieces of equipment and the L-4 plane to the scene and rendered timely aid.

Within its own boundaries, the brigade responded to sixty-nine calls during its first year of organization. That total has now climbed over the 100 mark. There has been a fifty percent reduction in forest fire losses, too.

Here is what happens when a fire is reported from an area outside the jurisdiction of the Palestine city fire department: The call is transferred to the police department. The officer on the desk first relays the information to Reagan and to chief Ernest Eilenberger. Then he calls the radio station, which breaks into its program and broadcasts the message.

The management of the radio station regards its contribution as a public service. It's an interesting sidelight that the volunteers had a chance to repay the station one day

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How the citizens of a busy little Texas town took up arms against forest fire—and cut losses in half

CHRISTMAS HARVEST

USFS Photos By Lee Prater

When his health broke down, Alex Forster returned to the land — and his accomplishment in restoring idle acres to productivity is highlighted by the harvest this year of his first crop of Christmas trees.

By JAMES B. CRAIG

THERE'S a comfortable old farm house midway between Cooperstown and Hartwick in upstate New York where the lights blink on early these crisp December mornings. It is the home of Bavarian-born Alex Forster, one-time New York City beautician, for whom the days are scarcely long enough for the harvesting of his first crop of Christmas trees.

Long before the morning sunlight has erased the filigree frost patterns on the windowpanes, Forster has quit the warmth of his kitchen with its pleasant breakfast aromas and started for his woodlot. It is a walk that never fails to cheer him. Ten years ago, when he turned his back on the turmoil of urban life to buy his 227 rural acres, the path to the scene of his present cutting operations would have been through idle pasture land. Today it is flanked by rows of healthy young trees, part of the 100 thousand he planted—an accomplishment that once elicited a neighbor's whimiscal comment that "Alex seems intent on giving the land back to the Indians."

The early morning milkman enroute to the creamery might find it difficult as he waves a friendly greeting to Forster to believe that this wiry, energetic man with the springy step had ever been anything but active and strong. But the truth is that a scant few years ago he was all but broken in spirit, with his delicate health the despair of a New York City physician. It was not until he deserted what he terms the "scramble for the almighty dollar," and returned to the land he learned to love as a boy, that he regained his health and a new zest for life.

Soon Alex is hard at work thinning his trees. It pleases him that his graceful evergreens he takes out, the greeness of their boughs accentuated by wispy puffs of snow, are soon destined to know even more glittering finery in happy city homes. All save one. This, the most symmetrical of all his well-tapered trees, will grace the Forster living room where it will be the center of Christmas activity.

When he pauses in his work to look across his fields he can see his wife tossing handsful of cracked corn to the chickens from the red apron

Tree Planter Alex Forster at work on his New York farm

"Wait until you see them ten years from now," Alex Forster (left) tells Farm Forester Charles B. Kresge in pointing to some of the 100,000 seedlings he has set out on once idle pasture land

she has gathered up into an improvised basket. And he can see his old farmhouse, comfortable and secure, enveloped by his acres of hardy, young trees. Yes, Forster thinks, it is going to be a good Christmas in his home—a home where happiness has come to dwell.

How Alex Forster attained this satisfying new existence after more than his measure of hardship is a story that strikes a cheerful note at a season of the year when people customarily take stock of their blessings. But more important, it shows what a willing man amply endowed with a pioneering spirit can do in turning idle acres into productive land.

To trace Forster's peregrinations to his upstate farm, it is necessary to first turn to Bavaria nearly a half century back where he, the fourth of ten children, grew up on a small farm. It was a happy Bavaria then, when nearby Berchtesgaden, framed by the Bavarian Alps, was a famous spa unblemished by the evil connotation it later acquired under Hitler. Munich, which Alex visited as a boy, in those days was the "City of Gemutlichkeit," but that friendliness for which its residents were justly proud later vanished under the grim specter of Nazism.

The Forsters were a closely-knit but not well-to-do family, and at the age of nine Alex got his first taste of forestry as an apprentice on the estate of a wealthy Bavarian baron. For six years, he worked and learned—planting trees, growing them in the nursery. Gradually, as he became huskier and more apt, his duties included cutting, scaling and millwork.

By the time World War I snatched him out of these happy surroundings and converted him into a soldier, Alex had developed a fondness for forestry that was never to diminish. After the war he bought up a number of cutover tracts and sold the stumps as firewood for railroad cars. Then he replanted. A short while later a lumber firm hired him as its purchasing agent and supervisor of cutting operations, but times were lean in defeated Germany and, in 1925, he determined to seek his fortune in the United States.

Arriving in New York his inability to speak English impeded his efforts to obtain employment commensurate with his abilities, and he finally had to settle for a yardman's job with a lumber company. Even so he was happy working with lumber and resolved to work his way up. Convinced he had a hopeful future, Alex married and established a home.

At this point fate struck a cruel blow. An accident at the lumber yard put him in the hospital with a fractured skull and other severe injuries. For three months he was blind and partially paralyzed. When he finally got back on his feet, a year and a half later, he was still far from well.

Due to the nature of his injuries, Alex was advised to seek less exhausting work and, aided by Mrs.

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FORESTS OF OKLAHOMA

By A. M. EMMERLING

OKLAHOMA is a large (69,919 square miles) and irregularly-shaped state, famous for oil and gas, wealthy Indians and the late Will Rogers. Mostly it is a prairie region, rolling grasslands which reach their highest general level in the northwest corner, at about 4,500 feet elevation. Over much of the state annual rainfall ranges from thirty-six down to twenty inches. West of a line running north-south through Oklahoma City, forests have practically no commercial value except for on-the-ground farm and ranch timber or posts. The shelterbelts might be cited as an exception; however, these are man-made forests.

The eastern counties present a different picture, both as to topography and vegetation. In the southeastern tip, near Broken Bow and Hugo, are stands of mixed pine and hardwoods similar to the forests of adjoining Arkansas. There is considerable loblolly pine on the rolling sandy hills, and such hardwoods as oak, elm and hickory are plentiful in the small stream bottoms. Farther north, in the mountains which reach to the Canadian River, there is an extension of Ouachita Mountain types; old-growth shortleaf pine sometimes occurring in pure stands, and many mixtures of upland hardwoods and pine.

North of the Canadian one meets the oak, hickory, pine type of the Ozarks—shorter trees and fewer on each acre. Slopes bear cedars (junipers) as well as the species mentioned above, while the lower valleys are covered with black walnut, cottonwood, sycamore, elm and pecan. This timber at one time was of high value, but was exploited to such an extent that present residual stands are just about inoperable.

Perhaps as good a way as any to describe Oklahoma's woodlands is to say that distinct forest types of Arkansas, Missouri and Kansas lap over into the "Sooner" state and there peter out. The north-central part of the state is a sort of prairie woodland mixture, reaching southward from Kansas half way to the Red River and Texas. Generally rolling or even rough, this region is characterized by fair stands of trees in the stream beds and nothing much elsewhere except small post oak, blackjack and cedar, commercially valueless. In the bottoms, occurring usually as a narrow strip, are cottonwood, sycamore, pecan, hackberry, bur oak and elm.

The shelterbelt is not a forest type but a man-made plantation, or series of plantations, extending north and south across the western counties and promising to exercise a favorable influence upon certain areas. It is highly regarded by local folk because of its effect upon erosion. It remains to be seen, of course, whether the shelterbelt will continue to work its magic during another prolonged dry cycle.

Forest types and their economic significance are naturally related to annual precipitation. The southeast-

Second-growth unthinned shortleaf pine looks like this in eastern Oklahoma

ern part of the state gets forty-five to fifty inches each year. In the northeast probably thirty-five to forty inches is normally received. But, as has been indicated, there is a gradual drop as one moves westward, and in certain regions tree growth cannot thrive for lack of moisture.

It is related that early in the nineteenth century the southeastern Indians petitioned President Jefferson to permit them to move to hunting grounds west of the Mississippi River. Their petition was favorably received, and some of the members of several tribes came over and occupied what is now Arkansas. But, beginning about 1817, the great southern tribes —Cherokees, Choctaws, Chickasaws, Creeks and Seminoles—were given most of the northern part of what is now Oklahoma, and were sent there, with military escorts.

They were evacuated, along with their many slaves, not only from Arkansas but from older settlements in Georgia, Alabama, Florida and Mississippi. During the Civil War all these tribes joined up with the Confederacy, so it is not strange that the postwar period was for them a time of retribution by the federal government. The Indians were made to give up much of their territory for occupancy by the westward-pushing white men. Among the earlier regions to be so settled was the forested eastern section of Oklahoma.

Fifty years ago, Kansas City was making secure its position as the great distributing center of a good-sized portion of the near Southwest. Enterprising men already had established lumber yards in hundreds of growing settlements in southern Iowa and Nebraska, western Missouri, Kansas and Oklahoma. To obtain construction materials for sale a few of these distributing firms bought timber in the Missouri Ozarks, while others went southward along the new railroads into eastern Oklahoma. By 1909 no less than 226 million board feet of lumber was being produced in Oklahoma in a single year.

Early lumbermen were able to block up fairly large areas of primeval pine forests, which they converted into timbers, lumber and lath in large and efficient mills, and then distributed widely over the rapidly-growing Southwest. When the trees were gone, most of the cutover lands were sought after by settlers. The usual practice was to sell these lands in units of 40 to 160 acres—for a few dollars an acre. There was unlimited pine timber to be had farther south, along the Kansas City Southern and other railroads in Arkansas, Louisiana and eastern Texas, so few operators gave a moment's thought to retaining their cutovers for growing more trees—or to cutting the existing stands carefully so as to protect the young growth not yet of merchantable size.

The record in Oklahoma is about the same as in other timbered states where little was done to preserve the original stand of trees. Exploitation was looked upon as a boon for the community. Fires ran unchecked until about 1924, when certain operators began to look into the possibilities of control. Out of united private efforts grew the present State Forestry Division. Funds are still limited, and even today forest protection is confined to the eastern part of the state.

An extension forester and four farm foresters work to encourage better management of small private woodlands. Activities are divided between work in the commercial timber growing belt and in the western prairie sections, where shelterbelts are promoted. The extent to which county agents cooperate in forestry is noteworthy in this state yet, because of the widely divergent ideas about the importance of woodlands, forestry has a difficult role in Oklahoma.

Because of long continued close cutting in the commercial areas, growing stocks are sadly depleted, and it is estimated that annual growth of sawtimber probably does not exceed 150 feet upon an average acre. With better management this might be increased 100 percent. At present the best growth is noted in the southeastern section, tapering off as one moves north, until in the mountains it presumably does not exceed fifty board feet an acre. Undoubtedly the maximum current rates are to be

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Old-growth shortleaf pine — typical of the Ozark Uplift area

DOROTHY CANFIELD'S FOREST

Thirty-five years ago, the famous authoress began planting white pines on her hillside farm in Vermont as an investment in America

By HAYDN S. PEARSON

Country Flavor Photos

YOU know Dorothy Canfield Fisher as one of the nation's finest writers. You know she has an abiding interest in social and economic rural problems. She is one of Vermont's most distinguished citizens.

But did you know she is a practicing conservationist on her hillside farm in Arlington? The 80,000 white pine trees she and her husband began planting thirty-five years ago are a magnificent stand on a typical New England hillside.

"We are neglecting our God-given heritage," she said to me, as we walked among acres and acres of beautiful pines. "Perhaps our man-made entanglements and the confusion of this unadjusted scientific age have blinded us to the second greatest problem of all. First, of course, we must learn to live together. Until we achieve peace among the nations of the world, all else is picayune.

"But while our statesmen and all of us are groping toward a solution that is already waiting in the formula of the Golden Rule, we can go to work on the second most vital problem. Until all men and women, boys and girls, everywhere have enough to eat and wear and decent homes in which to live, it's senseless to talk about the intangibles. Not that they are not important! But hungry, cold and ill-clad people are interested first in material essentials.

"Reforestation is one of the important aspects of assuring a food supply. Each year the world's population is increasing by some 20 millions. Our forests have been slaughtered. The rains rush to the valleys and cause floods. That destroys crops and land, buildings and lives. If we were only as wise in conservation as we are in scientific matters connected with test tubes, there would be hundreds of thousands of our citizens working with our woodlands. We need more national and state forests. We have only some 3,000 town forests. The Old World has shown what can be done with correctly handled woodlands. How long will it take us to wake up to the possibilities of production practices on millions and millions of neglected acres?"

Behind the reforestation project of the Fishers is an interesting story about how the original Canfields first settled there on the hillside a mile from the lovely small New England town of Arlington.

The Canfield clan left the cramped Puritanism of Boston in 1764 and headed west and north to a region where it was rumored men had freedom of thought and action. Contrary to popular opinion, the early Vermont settlers in the southern part of the Green Mountains were not poor people. They were substantial citizens who were looking for a different environment from that along the Boston, Salem and Newburyport shore.

In that original Canfield party was an old maid who laid down one condition about the new home. It must be where the water was soft! She was completely fed up with trying to wash the fine linen of the family in hard water. So the family hunted for a site around Bennington; they tried other villages. No luck. The water from springs was hard. They came to the village of Arlington. The group liked the area. They liked the settlers. But the old maid said, "No." She had a piece of soap with her and she tried to wash a handkerchief in the local brooks. No luck. Then someone spoke of a spring on a hill-

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KNOWING YOUR TREES

TORREY PINE

Pinus torreyana, Parry

By WARREN D. BRUSH

TORREY pine has the smallest range of any pine of the United States. It is confined to a narrow strip of coast, a few miles long, in southern California just north of San Diego, and the neighboring Santa Rosa Island. It is found only in open, scattered stands with little or no other growth, except the thin chaparral, on the highlands adjacent to the sea and on the sides of deep ravines and washes leading to the coast.

Along the coast where it is exposed to high winds, Torrey pine is a low, crooked, bent or sprawling tree from twenty-five to thirty-five feet in height and eight to fourteen inches in diameter. Away from the sea winds, it grows to a height of fifty to sixty feet, with a straight trunk as much as two and a half feet in diameter. The largest trees are found on sheltered sides of hills and spurs of canyons. The crown is small, rounded and often composed of only a few large, greatly developed branches. The stout twigs are bright green in their first season, becoming light purple and ultimately nearly black.

Torrey pine is readily distinguished from other pines of the Pacific Coast by its long, heavy needles which vary from seven and a half to thirteen inches in length and occur five to a bundle. The foliage is dark gray-green and clustered in large tufts at the ends of the stout branches.

The blossoms appear from January to March. The yellow staminate flowers occur in short, dense heads while the purplish pistillate flowers are borne on long stout stems. The deep russet or chocolate-brown cones are broadly ovate, from four to five inches long and about as broad as long. Strongly attached to the branches by thick stems, they ripen early in August of the third

Ralph D. Cornell

Along the coast where exposed to winds, Torrey Pine is a low, crooked, sprawling tree twenty-five to thirty feet tall. Away from the sea winds it attains greater height—has a straight trunk

Dr. A. E. Hubbard

Dark gray-green needles occur five to a bundle. The russet cones are four or five inches long

Dr. A. E. Hubbard

Yellow staminate flowers occur in short dense heads — the pistillate are borne on long stems

season, and by the middle of September some of the seeds are shed. The cones usually remain on the tree for four or five years.

When the cones fall, a few cone scales remain attached to the branch of the tree. These thick scales are armed with minute spines, and the large edible seeds, three-fourths to an inch long, are dark brown with areas of yellow-brown. They are nearly surrounded by thin dark brown wings, often nearly one-half inch long. Gathered in large quantities, they are eaten raw or roasted.

The bark of young trees, as well as the branches of old trees, is spongy and dull gray. On the trunks of old trees it is about an inch thick, irregularly and deeply divided into broad, flat ridges covered by wide, thin, light reddish brown scales.

The light, soft, wide-grained wood is low in strength properties. The heartwood is pale reddish brown and the sapwood nearly white. Because of the small size of the tree and its limited occurrence, the wood is of no commercial importance. It is occasionally used for fuel.

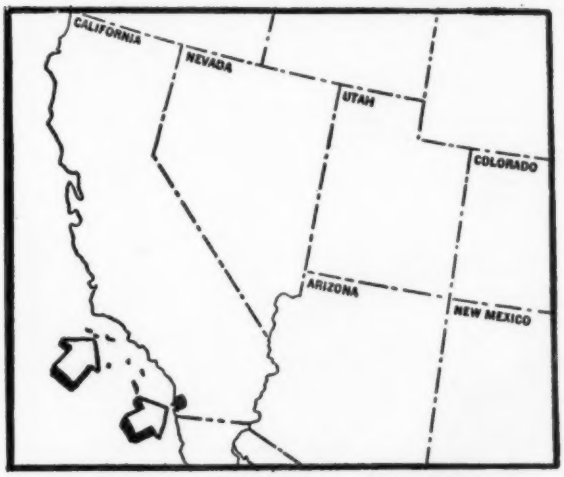
Torrey pine is a slow growing species. Trees ten to twelve inches in diameter are from seventy-five to eighty years old. It is also short-lived in comparison with other pines. It usually grows to an age of 100 to 150 years, with a maximum of 200 years.

Seeds are produced in large quantities every year, trees bearing well when from twelve to eighteen years old. Most of the seeds are discharged from the cones during their third year. Germination usually takes place in crevices and washed mineral soil. Reproduction is good and seedlings are quite numerous in the vicinity of parent trees.

Several names have been applied to this tree, including Soledad pine, Del Mar pine and lone pine — but Torrey pine or Torrey's pine is the one by which it is most commonly known.

Frank A. Schilling

On old trees bark is dull gray and spongy, irregularly divided into broad, flat ridges



Found only in southern California, Torrey Pine has the smallest range of any pine in the United States

A CORPORAL IN KOREA

Corporal Harold H. Burgess and Governor So Tuk Soon of Korea are just like that! And why not, for the young American directs His Excellency's reforestation program

From the lush rubber plantations in West Africa to the denuded hills of South Korea, by way of Michigan State College and the U. S. Army—that's the route by which Corporal Harold H. Burgess of Kalamazoo County, Michigan, arrived at his present job in the "Land of the Morning Calm."

As provincial adviser in the forestry section, National Department of Agriculture, U. S. Army Military Government in Korea, his chief concern these days is reforestation and erosion control, two important factors in the agricultural rehabilitation of Korea.

Assigned to Chungchong-Pukto, smallest of South Korea's nine provinces, he is the first American adviser to be stationed there to help the Koreans with forestry problems. The province covers territory equal to a large county in the United States.

At Taegon, capital of Chungchong-Pukto, 1,500 Koreans turned out last April 5 at the Taehun primary school grounds to hear Governor So Tuk Soon and other Korean dignitaries before marching by groups to designated planting areas on the slopes of the Po Mun Mountains. The Forest Erosion Control subsection had previously built terraces and gully dams where their citizens were now attempting to clothe the partially naked slopes with trees. This project was under the direction of Corporal Burgess.

"The forest situation in South Korea is critical," Corporal Burgess says. "Americans arriving in 1945 found the forests exploited and have watched the slopes denuded of trees by desperate postwar salvagers who had previously fulfilled their needs in North Korea.

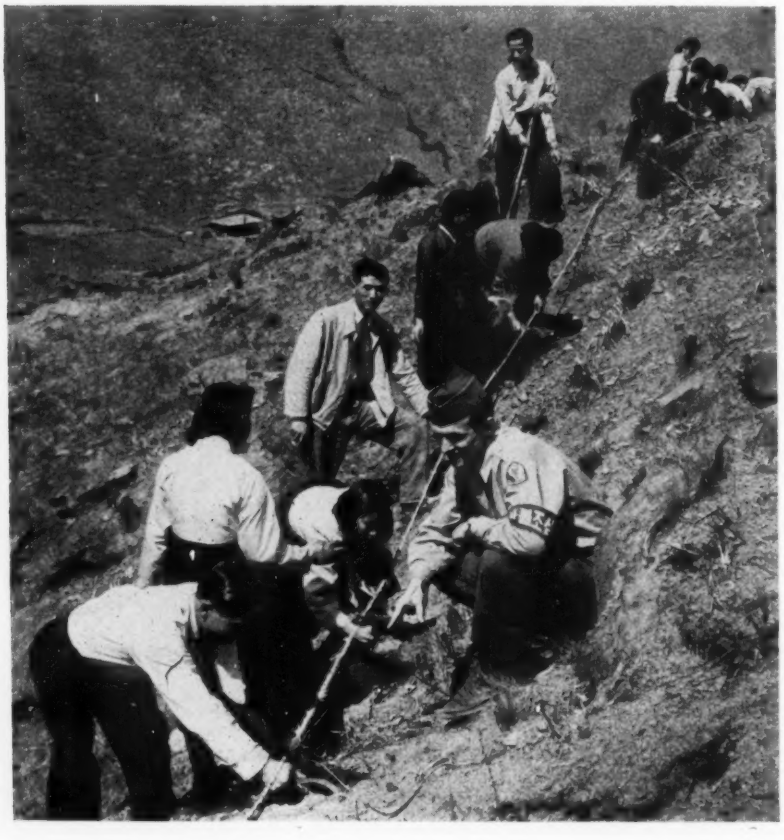
"Half again as much forest has been cut as grew in the past few years. A continuation of this would result in utter ruin. To meet this challenge Korean and American forestry advisers are recommending an all-out program of reforestation, erosion control, protection, woodfuel substitutes and an education program to show what needs to be done and why."

Born of farm parents, Burgess knew from boyhood that he wanted to work with the land. He chose Michigan State Agricultural College at East Lansing for furthering this ambition. In 1940 that school granted him a bachelor of science degree and for the next two years he was in the graduate school, serving at the same time as wildlife manager at the college.

In 1942 he went to Liberia, West Africa, to become superintendent of a rubber plantation for the Firestone Plantation Company, assigned to the job of overseeing 7,000 acres of Havea rubber. Late in 1944 he joined the staff of the U. S. Rubber Development Corporation, part of the U. S. Department of Commerce, as supervisor of wild rubber collections in that same area. For a spare time hobby, he assembled a Liberian bird and mammal collection.

At the close of the war, Burgess returned to Michigan and in 1946 received a master's degree in forestry. In September of that year he enlisted in the Army and January, 1948, found him in Korea. Because of his wide experience, USAMGIK officials lost no time in assigning him as provincial forestry adviser. After completing his tour of duty here, Burgess hopes to attend the Yale University Graduate School of Forestry.

Romance blossomed in Liberia for the young forester and Miss Ruth Longstaff, a Methodist missionary teacher assigned to a school on the Liberia-French Guinea border, and they were married in December, 1947, upon her return home. At present she is teaching in the public schools at Naugatuck, Conn.



Corporal Burgess (right) on the Korean tree-planting line with some of his 1,500 helpers

Department of Information

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Tall Tree of Peace

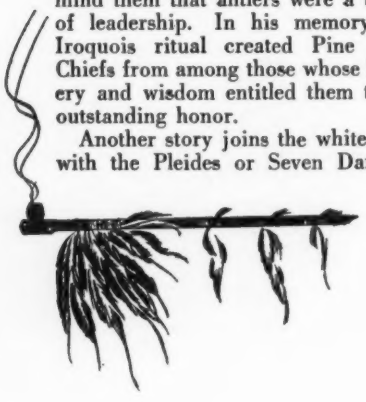
(*From page* 539)

roots, Howenin in his anger pulled up the tree and cast her into the hole underneath. On the spreading wings of a water bird, she was carried to the back of a giant turtle who swims forever in the sea of space. At the point where she landed appeared the World Tree, which grew from the inmost earth to the topmost reach of the sky. At the highest point was set the sun, while the ends of the branches were trimmed with stars. On this tree man was molded into being. A like concept is offered by Yggdrasil, the World Ash of Norse Mythology.

Of course, the details of these trees are not precisely defined, nor are they consistent from tribe to tribe. They are, however, recurring motifs in the wonderful Iroquoian quill and bead work. A semi-circle underlain by two lines represents the sky and the earth, and at the apex of the dome is often placed a highly variable Celestial Tree. Within the dome it becomes the World Tree, whose up-shooting branches suggest the balsam fir.

But what, one may ask, is the Tree of the Great Long, or Sword-like, Leaves? Here the archeologists offer a well-founded guess. They point out that the Iroquois' cultivation of maize, their artifacts, and their language indicate an origin in the Lower Mississippi Valley. Perhaps a dim image of the palm tree was preserved among them, or perhaps that of the longleaf pine.

Be that as it may, the tree above all others which impressed itself upon their imaginations was the white pine, the source of pitch, rope and medicine. They believed that the Spirit of the pine was once a brave warrior who still raised his spreading, upturned boughs high above the forest to guide his people and to remind them that antlers were a token of leadership. In his memory the Iroquois ritual created Pine Tree Chiefs from among those whose bravery and wisdom entitled them to an outstanding honor.



Another story joins the white pine with the Pleides or Seven Dancing Brothers. These young warriors, in the ecstasy of their youthful joy, danced clear off the earth despite the cries of their mother calling them back to her. Only the eldest had pity and looked down. The next instant he had fallen and disappeared into the ground. The following spring at the time of the budding plants, a tiny green shoot appeared which, carefully guarded by his mother, grew to a lofty pine. Within this tree are the blood and soul of the youth; and at night when the winds blow, he moans and calls to his brothers in the sky.

Such legends were possible because the Indian felt the forest as a living being. Each tree had a spirit formed, like himself, by the Supreme Power, whose anger he feared and whose aid he implored in his life of constant hardship. So haunted was he by the presence of unseen powers that storytelling was banned from the time the buds opened in the spring until the leaves dropped in the fall. Otherwise the trees might overhear and be offended by an oversight of the storyteller.

And yet, though he may think that the Iroquois had little enough to be thankful for, his religion was essentially not one of fear but of gratitude. It was based upon six annual festivals in which thanks were expressed toward every object which had helped sustain life during the year. Our own Thanksgiving has transferred this happy feature of Indian life into a national holiday.

We also preserve traces of the Maple Festival at which the trees were formally thanked for the sweet sap which the red man loved. The frolic and fun of the "sugaring-off" are part of our folk customs; and in French Canada every spring the village priest leads his parishioners to the forest to bless the maple trees. This is, however, a ceremony of rogation rather than of thanksgiving.

Among the Iroquois, the secret of the maple was supposed to be guarded by the grandmothers of the clans. When the spring sap began to run, they called a young man and ordered him to search for the precious tree. He went unsuccessfully to an oak, whereupon another youth was sent to try the hickory. Other tests sometimes followed; but the maple was proclaimed at last and the sap gathered.

Of this the Indians were fond as a beverage. Syrup was also made by boiling with hot stones, and was eaten with corn cakes or poured over popcorn to make a delicacy which survives today under the name of crackerjacks. Maple sugar was so highly valued for sweetening (honey bees came with the white man) that it became a medium of exchange in trade.

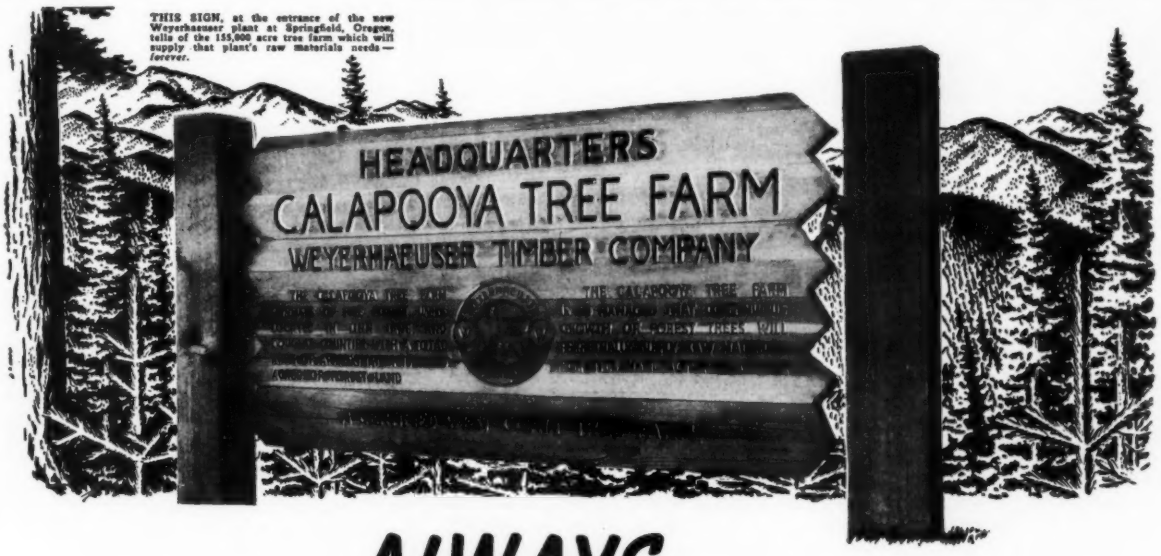
Another tree that profoundly impressed the Iroquois with its magic properties was the basswood, whose soft white wood and reddish buds have a life-like quality at once mysterious and suggestive. They made mats, ropes, and water conduits of the bark and ascribed medicinal values to the sap and fibers. Of the same tree were carved the masks of the False Face Company, a secret fraternal order whose founder was Ganusquah the Stone Giant. He spoke to his followers from a basswood and commanded them to learn the "language" of every tree.

In the white man's experience with the northeastern forest he has come to share the Indian's high regard for this trio of the white pine, the sugar maple and the basswood. But he scarcely venerates them as did his ruddy predecessor, at least to the extent justified by the wider and better uses he makes of them.

The ensuing history of the Five Nations is well known. Although they never became the strongly-welded political entity sometimes represented, they were able to act promptly and rigorously in the presence of the white invaders. In a desperate struggle to survive, tribes to the north, south and west were conquered and absorbed. The weight of the Iroquois on the side of the English and against the French changed the course of colonial history. They even survived the disasters of the American Revolution and the migration to Canada.

Today the councils of the Five Nations still meet, and Adodarhoh wields authority as an official of the Canadian Government. If few recognize the name of Dekanawideh, at least his associate Hiawatha survives in the fanciful poem of Longfellow.

But in the realm of imaginative symbolism, no finer concept has been expressed than the Iroquois' Great Tree of Peace, that marvelous pine whose boughs are the antlers of a giant stag, from whose top watches the ever vigilant eagle, and in whose shade the brotherhood of mankind meets to establish peace and banish war.



THIS SIGN, at the entrance of the new Weyerhaeuser plant at Springfield, Oregon, tells of the 155,000 acre tree farm which will supply that plant's raw materials needs — *forever.*

THERE WILL *ALWAYS* BE TIMBER FOR THE NEW WEYERHAEUSER PLANT AT SPRINGFIELD, OREGON

ANOTHER LINK in the national program to assure a permanent timber supply for America is the recently dedicated Calapooya Tree Farm, tributary to Springfield, Oregon. It is one of several such tree farms, operated by Weyerhaeuser to supply its manufacturing plants with raw materials on a permanent basis.

Weyerhaeuser Timber Company initiated and has long supported the tree farm program. We believe tree farming is the one way of providing a permanent supply of timber for our industry.

In tree farming the mature timber is harvested by methods which assure a new crop of young trees. Adequate fire detection and fire fighting crews and equipment are maintained to protect the growing crop.

Primary objective of the Calapooya tree farm is to provide a never-ending timber supply for this company's integrated manufacturing center at Springfield. Plant facilities will consist of a sawmill, dry kilns, a planing mill, a sulphate pulp mill and container board plant and related logging operations. These mills will comprise one of the community's major industries, with a year-around payroll of about 600 workers.

TO HELP INSURE A PERMANENT INDUSTRY WE-

Operate Tree Farms — to provide a never ending timber supply for our mills. The forest crop is harvested, reseeds, harvested, reseeds—in about 80-year cycles.

Diversify Our Manufacturing –in order to use all of the tree. The aim is to build manufacturing centers in each of our operating areas so that on one millsite we can make useful products from low value as well as high value material.

Develop New Products—to increase the "take" from each acre of forest land harvested. A staff of engineers and scientists spend all of their time in this work. More products mean more steady jobs.

Develop Permanent Markets—to be reasonably certain that Weyerhaeuser products are in steady demand year in and year out, in good times and bad. We work toward consistent high quality, and apply modern selling methods to create customer demand.

WEYERHAEUSER TIMBER IS A CROP FOREST PRODUCTS

WEYERHAEUSER SALES COMPANY

SAINT PAUL 1, MINNESOTA

NEWS IN REVIEW

NORRIS-DOXEY project foresters, operating in forty states, brought small woodlands owned by 14,220 farmers under sound management the first six months of 1948. This is a good record for only 160 foresters—but an accomplishment that is lamentably small in comparison with the major problem presented by the country's farm woodlands as a whole. Acreage for which aid was made available the first six months of the current year was 1,399,970, or about one half of one percent of the total. As the U. S. Forest Service points out, the capsule operation now being carried on by the handful of farm foresters is good as far as it goes—but it should be expanded.

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Timber sale receipts from national forests for the three months ending in September were $10,104,668, almost double those for the corresponding period of last year. According to the U. S. Forest Service, the increased revenue is largely due to rising market prices and construction of new roads in previously inaccessible timber stands. Coincident with the Forest Service quarterly report was the yearly timber sale summary of the Department of the Interior, which showed that receipts, principally from timber sales made by the Bureau of Land Management, were $6,861,056.

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West Coast sawmills are in the best position since the war to supply lumber needed for nearly 950 thousand new homes. The 1,505 sawmills in the Douglasfir region of Oregon and Washington report production totals of nearly six billion board feet for the first thirty-four weeks in 1948. The industry's unfilled order file stood at six and a half million board feet at the end of August, while gross stocks were at 700 million board feet.

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Ordinarily, counting ducks from the air is an innocuous practice but Pilot Leon D. Cool was handed a package of trouble this summer above Alberta, Canada's bush country, when an aggressive honker crashed into his Stinson L-5 plane and got snarled up in the cowling.

Up to that juncture Cool had been carrying on an aerial survey of waterfowl nesting grounds for the Fish and Wildlife Service. But with the duck in the cowling the plane's air flow was cut off and Cool was obliged to start looking for a place to set down his plane.

Spotting a likely-looking meadow, he glided down, anticipating a soft landing. That he had miscalculated occurred to him only when there was a splash. It was a bog, not a meadow, he had spotted—and Cool was stuck in it.

Cree Indians who discovered the hapless pilot three days later got their ponies and skidded the plane out on improvised skis. Now Pilot Cool is airborne once again, but he is keeping a wary eye peeled for Kamikaze-minded ducks.

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Concrete results are already evident from the recent doubling of the Louisiana Forestry Commission's appropriation by the State Legislature. An additional two million acres in Louisiana are now receiving fire protection. Many fire-fighting vehicles of pre-war vintage have been replaced and rolling stock is being increased by sixteen percent, with all vehicles equipped with radios. Present plans also call for an increase in the number of lookout towers. And lastly, fire fighting personnel have received across-the-board pay raises of approximately eighteen percent.

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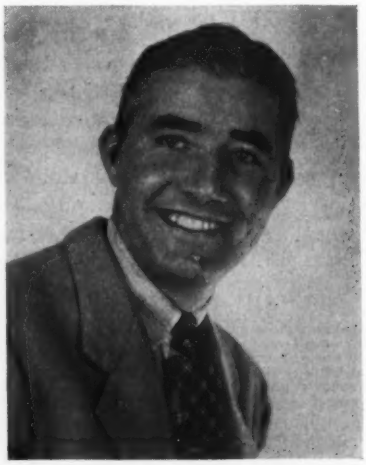
The possibility of producing a nontoxic shot to replace shotgun pellets now on the market is being explored by the field laboratory staff of the Illinois Natural History Museum. Purpose of the survey is to check lead poisoning of wild waterfowl.



Harvey R. Frantz

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Two more states — Georgia and Massachusetts—joined the Tree Farm System in October. The addition of these two states brings to twenty-three the number officially cooperating in the national movement to assist owners in the profitable and perpetual production of wood for use.

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William Gibbs Howard, director of the Division of Lands and Forests of the New York State Conservation Department, who has been called the "father of forest fire protection" in that state, died October 30 of a heart attack after a golf match at the Albany Country Club. He was sixty-one.

Born in Medford, Massachusetts, Mr. Howard received an A.B. degree from Harvard in 1907, and an M.F. degree from the Harvard Forestry School in 1908. After a short period with the U. S. Forest Service, he joined the staff of what was then the New York State Forest, Fish and Game Commission. In 1909 he was made assistant superintendent of New York forests and, in 1911, became director of lands and forests for the State Department.

Always active in sponsoring recreation, Mr. Howard, as a member of the New York State Sports Commission, helped promote the 1932 Winter Olympics at Lake Placid.

In 1933 the Association of State Foresters elected him president and a year later he became a vice-president of The Society of American Foresters. In 1944 he was named by The American Forestry Association to serve on the five-man Advisory Committee of its Forest Resource Appraisal.

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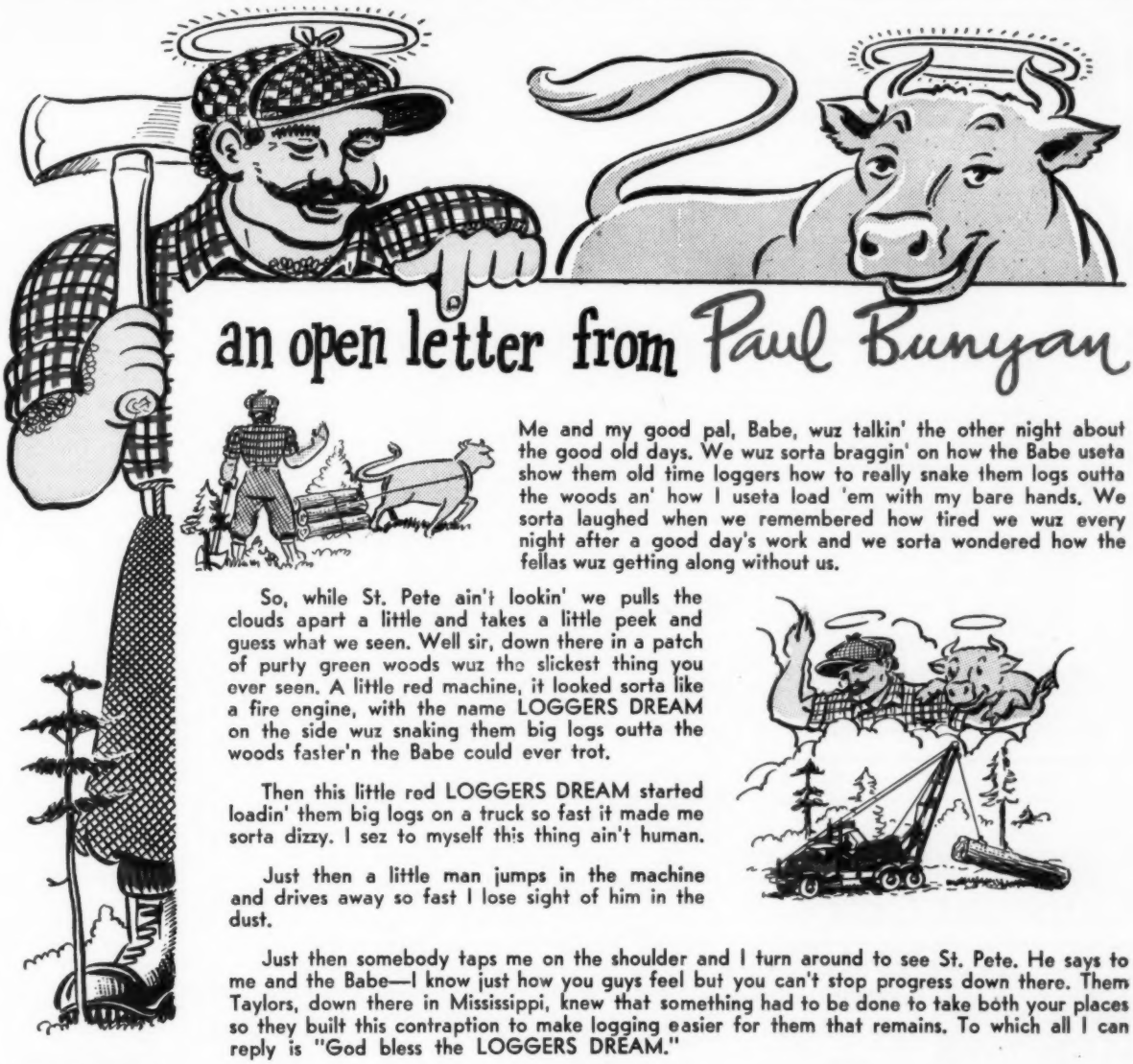
Appointments and Awards — Harvey R. Frantz, of Georgetown, Delaware, as soil conservationist and forester for the Interstate Commission on the Delaware River Basin (INCODEL). . . . Arthur A. Brown as chief of the new Division of Fire Research of the U. S. Forest Service. . . . Dr. Elmer D. Merrill, director emeritus of the Arnold Arboretum of Harvard University, as Officer in the Netherlands Order of Orange Nassau in recognition of his contribution to Dutch and Indonesian botany. . . . Roy M. Carter, wood utilization specialist at the U. S. Forest Service's Northeastern Forest Experiment Station, as professor of wood utilization in the Division of Forestry of North Carolina State College, Raleigh, North Carolina.



an open letter from Paul Bunyan

Me and my good pal, Babe, wuz talkin' the other night about the good old days. We wuz sorta braggin' on how the Babe useta show them old time loggers how to really snake them logs outta the woods an' how I useta load 'em with my bare hands. We sorta laughed when we remembered how tired we wuz every night after a good day's work and we sorta wondered how the fellas wuz getting along without us.

So, while St. Pete ain't lookin' we pulls the clouds apart a little and takes a little peek and guess what we seen. Well sir, down there in a patch of purty green woods wuz the slickest thing you ever seen. A little red machine, it looked sorta like a fire engine, with the name LOGGERS DREAM on the side wuz snaking them big logs outta the woods faster'n the Babe could ever trot.

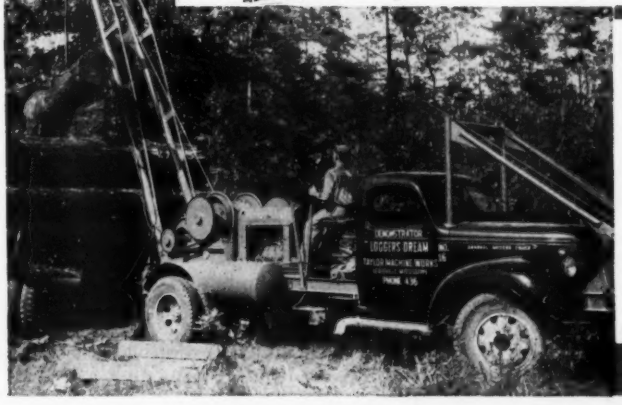
Then this little red LOGGERS DREAM started loadin' them big logs on a truck so fast it made me sorta dizzy. I sez to myself this thing ain't human.

Just then a little man jumps in the machine and drives away so fast I lose sight of him in the dust.

Just then somebody taps me on the shoulder and I turn around to see St. Pete. He says to me and the Babe—I know just how you guys feel but you can't stop progress down there. Them Taylors, down there in Mississippi, knew that something had to be done to take both your places so they built this contraption to make logging easier for them that remains. To which all I can reply is "God bless the LOGGERS DREAM."

Paul Bunyan

If you don't believe that Paul and the Babe saw a new miracle, why not write to the factory for further information about the LOGGERS DREAM.



TAYLOR MACHINE WORKS

LOUISVILLE, MISSISSIPPI

Gentlemen:

Please send me all the facts about your LOGGERS DREAM and how I can increase my logging profits.

NAME.....

FIRM.....

ADDRESS.....

.....

the LOGGERS DREAM

VISIT OUR EXPORT SALES OFFICE, INTERNATIONAL TRADE MART, NEW ORLEANS, LA.

Putting Research to Work

(*From page* 538)

basis for stand improvement practices in the Appalachian region, a major contribution in view of the need for rehabilitation operations of this kind in badly abused hardwood and pine forests. Research plus experience has given us the basis for crude forest management for most major types and for advanced practices in some. For the most part, however, we have been busily gathering the scraps of knowledge which must still be woven into the fabric of practice.

Indeed, if we face the facts squarely, there has been relatively little application of research to timber growing in the United States. Contrast this with agriculture and recent advances in crop production. Foresters cannot point to any great overall increase in forest production during the war years as can agriculturists, though the same stimuli existed—patriotic incentive, high prices and unlimited markets. There are obvious differences, but the fact remains that until recent years, entirely aside from the question of knowledge, forestry has lacked customers. Agriculture had practicing farmers, able and ready to apply research; forestry has had very few timber farmers ready to apply parallel research.

Even if past research had produced an adequate knowledge of timber growing, much of it would not have been applied. We have needed, and still need, a broad acceptance of the concept of timber growing as a crop, especially on private land for private profit. Only when timber is grown commonly as a crop—when high yields of pulpwood, or lumber, or poles, or cellulose, on a sustained basis, are the accepted aims of operating landowners—will we see the use of improved trees and improved methods of culture and better methods of harvesting similar to those of agriculture.

But these days are now at hand. Recent surveys have shown that a substantial number of landowners are beginning to practice forestry. It is when we attempt to prescribe management methods for these owners—both large and small—that our knowledge, in spite of the advances cited, is still too general—the gaps too many. The keener the interest in timber growing, the better the possibilities of intensive application of research, the more unsatisfactory present knowledge seems.

Thus, in spite of past activities and substantial progress, the widespread application of research to forest lands is still ahead of us. We need to expand research to achieve the highest type of scientific management on forest-producing and associated range lands and to improve and develop new uses for the products that are harvested from them.

The future can be bright, however, if we take a lesson from other fields and carry on in adequate degree the long-time and often tedious and expensive work needed to acquire knowledge and prepare for the day when informed and interested timber farmers, prices and markets lay the basis for use of this knowledge.

(*This article is adapted from a paper delivered by Mr. Haig before the 67th Annual Meeting of The American Forestry Association at Chattanooga, Tennessee, in October.* —Editor's Note).

Christmas Harvest

(*From page* 553)

Forster, set out to learn the hairdressing business. Eventually he opened his own shop. There are 83,000 hair dressing establishments in the United States and they are not unprofitable, but Forster slowly learned that this occupation was not for a man whose proclivities were for forestry rather than bleaches, upsweeps and mud packs. "There were days," he said, "I longed to go hunting just to see a green tree again."

For the next few years his health continued to deteriorate and, finally his physician told him bluntly, "If you hope to get your health back go to the country."

A few months later he discovered a deserted farm near Cooperstown. It was in a sad state of neglect but, to his shrewd eyes, it presented possibilities, including a sound woodlot. He promptly bought the property.

"Since 1938, when I landed here, there has not been one idle day," Forster now relates. The air smelled fresh and clean. The sunshine proved a healthful tonic. His previously squeamish appetite perked up and soon he could stow away a stack of

wheats with as much relish as the next man. At night he slept soundly and woke up refreshed and ready to work.

One of Forster's first acts was to join the Otsego Forest Products Co-operative Association, which has been of great assistance to him. Its operations, in addition to advice on management, take in the entire process of lumbering on a cooperative basis, from the cutting of the tree, through the milling operation, to the marketing of the lumber.

Forster's planting has all been done on old pasture land adjoining his hardwood stand, which has been thinned to give young trees a chance to develop. Two heavy cuttings have been made, chiefly beech. The present young forest is predominantly maple, ash, cherry and basswood.

"This is a good land to produce timber," he says.

Forster confesses his plans for making a living when he first arrived from New York were somewhat vague. First of all, he hoped to regain his health and then try to make forestry profitable on his farm. However, as events transpired, there was no need to have worried about making ends meet.

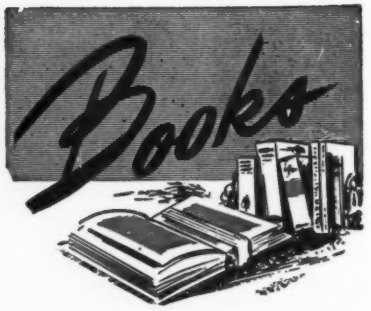
The first year on the farm the Forsters had twenty guests, and when they returned to the city they spread the word about life in the country. From the enthusiasm of these guests sprouted a full-fledged summer guest business.

When the couple decided their house was too small to properly accommodate all the people who wanted to stay with them, Forster relates "out came the old ax and we cut our own trees to provide the rough lumber for an annex to the original house. The house now has twenty-three rooms, three bathrooms and one big dining room—all with plywood interiors."

"And I see to it that our guests go home with improved ideas regarding forestry and the importance of looking after our woodlands," Forster says.

There is need for such education, he thinks. The acres and acres of idle land in America puzzles him. For Alex Forster regards himself merely as the trustee of the land to which he temporarily holds title. And he feels he is responsible for its enrichment during the span of years allotted him.

That is why the future of Alex Forster's farm looks bright. And that is why he looks forward to Christmas as he busies himself with his crop of Christmas trees.



OUR PLUNDERED PLANET, by Fairfield Osborn. Published by Little, Brown and Company, Boston, Massachusetts. 217 pages. $2.50.

Here is the story of man's history of self-destruction — in Europe, in Asia, in Africa, and at an accelerated pace in the continents of the new world. The pattern is unalterably the same — misuse of the land.

Author Osborn, president of the New York Zoological Society, poses the question of whether or not we are to continue on the same "perilous road once traveled to its dead end by other mighty and splendid nations, or, in our wisdom, are we going to choose the only route that does not lead to the disaster that has befallen so many other peoples of the earth?"

To answer this question hopefully, he concludes, statesmen and scientists together must devise positive action to stem the flow of life blood — soil and water — from a rapidly-dying and highly complex biological entity, the planet Earth.

SOIL AND WATER CONSERVATION IN THE PUNJAB, by R. Maclogan Gorrie. Published by Punjab Government Book Depot, Lahore, India. 290 pages, illus. Price 7s 6d.

A manual for land management in the Punjab, this book emphasizes water conservation as an essential step in the fuller use of the land. It includes details of practical field work in planting, reclamation of torrent beds and wasteland and the control of runoff from cultivated fields. An analysis is made of erosional processes by water and wind and the extent to which both are responsible for the destruction of cultivable land and the loss of soil fertility.

DROUGHT, ITS CAUSES AND EFFECTS, by Ivan Ray Tannenhill. Published by Princeton University Press, Princeton, New Jersey. 264 pages, illus. Price $3.

The chief of the U. S. Weather Bureau's division of synoptic reports and forecasts has brought together in this book a comprehensive study of drought and means of combating it. His imaginative grasp of a vast amount of weather data enables him to point out many previously hidden relations of the key signs of drought and the interplay of forces that produce it. His analysis of the effect of sunspot cycles, variations of ocean and continental temperatures and circulation of the atmosphere is of vital importance in understanding the major factors that control the weather.

FARM MANAGEMENT MANUAL, by V. B. Hart, S. W. Warren and I. R. Bierly. Published by Comstock Publishing Company, Ithaca, New York. 84 pages. Price $1.

Farmers are again faced with the economic problems arising from a major war. This manual is intended to aid agricultural and homemaking extension workers and teachers in helping farmers organize and manage their farm enterprises. While not intended to be a complete answer to all the problems of agricultural economy, it serves as an excellent guide to clearer thinking on such questions as prices, making a farm pay, labor saving and record keeping.

RESOURCE MANAGEMENT IN NORTH CAROLINA, by Paul W. Wager and Donald B. Hayman. Published by the Institute for Research in Social Science, University of North Carolina, Chapel Hill, North Carolina. 192 pages.

This is a study of the growth of public agencies dedicated to the protection and management of North Carolina's natural resources, an examination of their organization and procedures, and an evaluation of them in the light of approved administrative practices. The authors point out that there is probably no governmental function more dependent than conservation on the understanding and support of the people, yet they are often confused in regard to objectives or the means to attain them. While a study of North Carolina, the methods and analyses of the authors should be of value elsewhere in helping the citizen obtain the greatest return for his conservation dollar.

FUR FARMING FOR PROFIT, by Frank G. Ashbrook. Published by Orange Judd Publishing Company, New York, N. Y. 429 pages, illus. Price $4.

A technical discussion in a highly specialized field, Mr. Ashbrook's book provides the facts and principles the fur animal breeder and student of fur animal management should know. The author's twenty-five years of experience in this field gives the book authority and weight. The book includes the history and development of fur farming, fur farming areas, advice to beginners, selecting a fur farming site, essentials of breeding, feeding, management, prevention and treatment of disease, fox farming, mink raising, raising other fur animals—fishers, martens, otters, skunks, raccoons, opossums, beavers, muskrats, nutrias, chinchillas and Karakul sheep, transporting live animals, pelting, marketing fur, associations and cooperatives, and fur animal exhibitions.

YARNS OF THE YELLOWSTONE, by Daniel N. Miles. Published by The William-Frederick Press, New York, New York. 76 pages, illus. Price $1.

Parents contemplating a trip to Yellowstone next summer would make a hit with their children by providing them with this juvenile guide to the park. It is the story of the visit of Mary and Sammy to the big park and of their garrulous guide, Jim. For all the seeming anecdotes, the account of the trip is authentic and colorful. This is not a mere travelog; it is a pioneer story bringing out all the lure and lore of Yellowstone. The author's illustrations are effective.

THE BOOK OF NATURE HOBBIES, by Ted Pettit. Published by Didier, New York 21, New York. 278 pages, illus. Price $3.50.

If you are looking for a nature hobby, this book is the answer to your problem. It is a collection of hobbies—ranging from how to construct a fernery to outdoor photography. As Ted Pettit points out, nature hobbies are not only constructive, they are also fun. Some of the hobbies suggested in this book might strike the reader as a little on the odd side but remember it takes all types to suit all tastes. There's one in this book for everybody. Pen and ink drawings by Don Ross illustrate what the author is talking about.

Old Rail Fences

(*From page* 548)

ward off, crept into general English usage. For the followers of William the Conqueror soon established the French habit of closing off their deer parks to the public during the fawning season, making it *defens* to trespass therein. By 1742, "fence month" had become established as beginning fifteen days before mid-summer. From the same Latin, post was *postis*, a stake driven into the ground. Rails, however, derived from the Teuton *rhegulon*, to bolt. Yet antedating the Norman invaders the ancient freemen of Saxon England were already fencing in their homesteads.

These curtilages, or *haws*, as they were called in Domesday Book, gave their name to the enclosures themselves, so that haws remains the only discoverable Anglo-Saxon word for fencing and lives on still in the name hawthorn, or literally fence thorn, which characterizes the Celtic settlements of Devonshire and Cornwall. A modern anomaly is presented in Illinois, previously noted post and rail state, recently establishing over 100 thousand miles of multiflora rose hedge in an effort to solve expensive fencing problems.

As agriculture advanced in Medieval times, pasture paddocks for the fattening of cattle, enclosing oxen, rearing calves and so on became customary on the manors. Within these "happy garstons" the villagers celebrated their festivals, May games and the distribution of bread and ale in Rogation week. During this time fencing was limited to the garstons, deer parks, a small area around the manors, and movable fences along the drift ways down which the peasants drove their cattle to common pasturage.

But the ancient alodial instincts of the Scandinavian ancestry common to most Englishmen began to triumph over the feudal system. Little by little the nobles started enclosing their entire demesnes as well as their *assart*, or wood, lands. Cautiously the tenants followed and soon their cottages, too, were "fencéd all about with stikkes." Already certain customs had crept into English common land laws inherited originally from the Brehon statutes of Ireland, which, themselves, had contained no fencing prescriptions other than a prohibition against allowing cattle to stray—a code that was also adopted in England. In ancient Winchester, the south fenced against the north, the

east against the west; while the owner of a ditch was the man on whose side a hedge was planted.

The wording of these time-honored laws is revealing. "To suffer the pale to decay whereby the deer is dispersed is waste. Cutting down of willows, beech, birch, ashe, maple or the like standing in the defence of the house is destruction. If there be a quickset fence of white thorne, if the tenant stub it up, this is destruction."

With the eventual fencing of his land, the peasant could demand wages for his services to the lord to whom he had formerly been in bondage for his cottage and strips of field. But the gains were short-lived. The greedy hands of the nobility stretched out to the commons on which the villagers pastured their stock, fencing them about and restricting their use then, finally, absorbing them into their own holdings.

Some curious arguments were used in justification of this robbery.

In 1652, one Silvanus Taylor addressed to "The supreme authority of the nation for the Common-Good, Parliament" a plea that the commons bred indolence in the children of the poor as they looked after, perhaps, one cow and a few sheep. Whereas in the spinning of worsted woolen or flax they would have steadiness and industry. Another argued that since the commons were overgrown with bushes the cattle feeding upon the young leaves of hazel, oak and hawthorn wore their teeth to stumps before they were four years old.

By 1800, the infamous Enclosures Acts had wrest from the cottagers grazing land, fuel, forage for fowl and agricultural land—not to mention the ground for their homes. Small wonder that the Pilgrims, coming as most of them did from the oppressed village settlements that had once cultivated two thirds of England's land and who still retained within their hearts that spark of Scandinavian freemen, lost no time in the new world in establishing their commons and enclosing their allotted plots.

Records of Newbury, Massachusetts, in 1644, read, "It is therefore ordered that all fences, general and particular, at first setting up shall be made so sufficient as to keep out all manner of swyne and other cattle great or small."

A two-shilling fine was imposed upon the owner of a fence through which cattle broke. Thus the vast grazing stretches of America had necessitated a reversal of the common law of England, where the cattle were fenced in.

Each state established its own legal fence. Pennsylvania required a height of five feet, "within said province and the counties annexed." By 1865 it imposed a $50 fine for destroying part of a fence. In Delaware a four and one-half foot fence of wood, stone, or well set thorn was the law.

Virginia's rail fences, pig-tight with small rails at bottom, large ones at top, snaked along in eleven-foot panels which actually only advanced the fence about three quarters of their length. This serpentine construction, traced from Scandinavia to the Austrian Tyrol is still found in many sections of the country and is estimated to waste two acres for each mile of its meandering course. But undeniably the worm fence proves a fine wildlife haven, and it repulses both man and beast better than a post and rail fence.

Deforestation and fence-making went hand in hand across the continent. When Abraham Lincoln moved with his family at the age of eight into "unbroken forest" an ax was immediately provided him. His first autumn in Illinois, thirteen years later, he contracted to split 3,000 rails, probably of black walnut. But Abe, despite his championship prowess, was indolent; the job was not finished until late the following winter. Payment was one dollar for 100 rails. Settled by the French, Illinois kept a system of common pasturage for over a century.

In time fence heights were established throughout the nation at about four and one-half feet and animals ran at large only by township option. The fence forms varied with the materials available or the nationality of the settlers. Clearing the rocky New England ground led naturally to stone walls in rural areas, while their picket fencing finally became a stylish city cousin to the wooden enclosures found elsewhere. In classic lines

matching the architecture of the homes, panels of white spindles with elaborately turned posts and grilled wooden gates set off tiny old world gardens from the bordering village greens.

Although post and rail fences were common in Sweden and within the hedged estates of England, the fence-making tools of the colonists remained crude for some time. By 1675, only the German-imported mortising, or narrow post, ax supplemented the settlers' broad ax and common ax.

Yet a Pennsylvania German calendar of 1798 showed that America built much post and rail fencing. In 1801, a certain R. Weems received a patent for a post-boring machine and in 1805 the spiral auger was invented. With these new labor saving devices finally at the disposal of every farmer, post and rail fencing received an enormous impetus from 1850 onward.

By 1871, fencing in the United States was estimated by the Department of Agriculture to be worth over $1,500,000,000, with an annual outlay for repairs of close to $94,000,000. They became in some rural areas more valuable than the land which they enclosed. Yet so long as timber remained, the landowner continued to surround his holdings with a strong tight fence and good woodchoppers like old Tom Hatch were valued members of each community.

Springtime and thawing ground meant men, usually working in pairs, setting out glaringly new fencing at the rate of twenty-five to thirty panels a day, depending upon the digging. Within a year the yellow wood would have mellowed to gray and the earth sent up tendrils to weave about the posts—as Thoreau described the vines of Walden taking back unto their live green world a wooden chair he had placed outside his cabin.

Old rails once burned with a fierce glow on winter hearths, and from the fencing surrounding one-room schoolhouses came most of the sport at recess and noon hour. Rails were removed to form see-saws, first graders low to the ground, the big boys bouncing terrifyingly on the topmost line of the fence.

The post and rail fence will, we hope, always be with us. Otherwise, what will become of the post-sitting lookout crow, who flaps jet wings as he screeches warning to his plundering brethren, and where will goblins and fiery-eyed cats perch themselves on frosty October nights?

Christmas Trees

(*From page* 543)

and brought into the house so that they would be in full bloom at the time of celebration. An Arab geographer of the tenth century recorded that it was tradition that trees and flowers await bloom on Christmas. Candles were first seen on a flowering Christmas tree in the thirteenth century, according to a French epic. Another legend credits the rod of Joseph of Arimathea with flowering at Christmas at Glastonbury and elsewhere in England.

Some of the theories held by researchers are not in keeping with the accepted belief that the Christmas tree, with its variations in many lands, is a symbol used in celebrating the birth of the Christ Child. The argument here is that similar customs were in existence more than 5,000 years prior to the birth of Christ.

These researchers point to the custom widely practiced throughout the ancient world of decorating houses with green boughs—a custom undoubtedly stemming from the worship of trees by the early people. They remind us, too, that sacrificial offerings, in the form of first-harvested crops, were hung on certain trees in which, they believed, dwelt spirits or gods.

Another indication, they say, is that most pagan peoples of antiquity worshipped the sun, and that great festivals to honor sun gods were held at the time of the winter solstice, the shortest day of the year. The old Goths and Saxons called this festival Yule. Early Egyptians hung sprays from palm trees throughout their homes during this period. And Germanic tribes celebrated by bedecking a fir tree. During the Roman feasts to Saturn, they raised aloft boughs of evergreens and laurel. The Greeks and Scandinavians, at their winter rites, revered the evergreen fir. In Druid lore the mistletoe and green boughs symbolized life eternal, and in Norse mythology the evergreens signified the revival of Balder, the beloved sun god.

So it goes. Somewhere deep in religion, folklore, mythology, legend, superstition or paganism the researcher hopes to find the answer to the origin of the Christmas tree. It's an old mystery—one that likely will defy solution. No one, it would seem, will be able to say for sure why millions of trees are decorated in homes throughout the world on Christmas eve—or where or when the happy custom began.

But, fact or fancy, the wealth of material researchers are developing provides a fascinating background to the Christmas tree ceremony.

Trees for Tomorrow

(*From page* 542)

built for training foresters for the Civilian Conservation Corps. Upon the discontinuation of the Corps, the camp property was under the control of the U. S. Forest Service. However, the service was not authorized, nor did it have the funds, to throw the camp open to public use. Trees for Tomorrow suggested a cooperative proposition. Now the Forest Service leases the site to Trees for Tomorrow which operates the camp, sees that it is manned with maintenance personnel and kitchen staff and generally keeps it in shape for use by conservation groups as a school in the woods.

For the past three years Eagle River has been host to such groups from early May until late October. Federal and state foresters use it for meetings and demonstrations, summer school sessions in field science are sponsored by nine state teachers colleges, 4-H Clubs take over for a week, teachers and school officials come annually to learn more about teaching conservation, nature clubs and similar organizations take advantage of its facilities.

Ideally located for show-me trips, the camp has a woodland in which Trees for Tomorrow foresters have made nature walks and have set up demonstrations of proper cutting methods and sustained-yield practices. Nearby are lands of one of the member mills to which visitors are taken for observation of methods used by industry; also nearby are state and national forests and a permanent school forest workshop.

Again, cooperation of all agencies, with Trees for Tomorrow acting primarily as a catalytic agent, makes Eagle River a unique site for "on the spot" study of conservation.

The camp has a combination lecture hall and administration building, a dining hall, laboratory, a forest products exhibit building and two dormitories. It can accommodate sixty persons. An advisory committee composed of a representative of the U. S. Forest Service, a member of the State Conservation Department and Trees for Tomorrow is available to help any group plan its use of the camp and to help find leadership for camp activities.

Each month, landowners within the seven-county area receive copies of *Tree Tips*, a publication designed to keep them abreast of what is going on in conservation. In addition, it carries advice on woodland management. A sound motion picture, "Green Frontiers," has been produced. Six copies are given state-wide distribution by the University of Wisconsin.

Wisconsin has become aware of its forests and of their possible contribution to the state wealth. Trees for Tomorrow can take credit for no small part of this awakening. While other agencies within the state are likewise doing excellent work in conservation, this relatively new agency, after almost five years of persistent work, has emphasized to industry and landowner alike the sound economy of good forest management.

Typical of the attitude is that expressed by a number of landowners when approached by land buyers for the paper mills: "My land is worth money now that it is growing trees—it's worth as much to me as it is to the paper mill." This attitude is encouraged by the member mills in the Trees for Tomorrow program. After all, a good neighbor protecting his forest land and managing it for continuous crops of timber is just as important to the mill as its own lands.

Although sponsored by the pulp and paper industry, Trees for Tomorrow does not strive for pulpwood production alone. Taylor says, "If the land and the species present can best produce sawlogs we encourage the owner along these lines. We must protect the integrity of the project."

Dorothy Canfield's Forest

(*From page* 556)

side near the road that led north to Manchester. The spinster went up. She washed her handkerchief. Lo and behold, the water was soft! That's where the group settled and today Dorothy lives in the delightful, low-lying home nestled there against the hillside, below that soft water spring.

"The Canfields were not farmers," Mrs. Fisher said. "We sharpened our wits and lived by lumbering, preaching and teaching. My ancestors helped cut off the virgin trees, and now I am trying to do my share in getting trees to growing again on these thin-soiled hillsides."

It was thirty-five years ago that the planting began. Year by year the area set to trees was increased. Each spring more trees are set. The seedling trees can be bought very inexpensively from state forest nurseries. "We have learned how simple and easy it is to restore forests to the land. The first years there is very slow growth, but then the roots take hold and the trees begin to shoot upward. Anyone can call on the state forestry department and his county agent for help at any time." Walking over that hillside forest on a thick spongy carpet of needles one thinks of the barren worthless land of years ago. The needles are forming a thick mulch that holds the water. Each year the mulch grows deeper and the trees grow faster.

"I often think of a remark Robert Frost made years ago when he was visiting us and saw the little pines growing. He said, 'To have the last 30 years of life interesting, one should be interested in trees before he is 30 years old!'

"Thirty-five years ago when my daughter Sally was four years old, I saw her out on the hillside jumping over the tops of the small trees. When I asked her why, she said, 'When I'm grown up and these trees are grown up, I want to be able to say I jumped over their tops.' "

Mrs. Fisher believes there is a great opportunity for service clubs, veterans' organizations, fraternal groups and women's clubs to sponsor town forests. "I wish our granges and farm bureau organizations would go at reforestation as heartily as they have tackled other problems. A nationwide crusade to start civic forests, replant eroded farm lands and make forestry a major profession would be a great step forward for the nation and the welfare of our children."

Oklahoma

(*From page* 555)

found on the national forest and in the managed private stands.

Leaving out of this reckoning the non-commercial woodlands, estimated at not less than 4,448,000 acres, the commercial forest is reported as 5,887,000 acres. Of this, 160,000 acres are in national forests, 56,000 acres in other federal holdings, and 23,000 acres state-owned. Indians have 400,000 acres of commercial forests, farmers own 1,177,000 acres, while the remainder, 4,068,000 acres, is industrial.

Approximately 515,000 acres of this woodland bear sawtimber, while 3,433,000 acres are of pole timber size. Of the remainder, 1,108,000 acres are fairly well stocked with saplings and seedlings—but 817,000 acres are poorly stocked or barren. Such is the growing stock upon which Oklahoma must rely for future timber supplies. Non-commercial forests presumably will be considerably reduced by removal of postoak and black-jack thickets by farmers.

At present the commercial timber stands amount to 4,415,000,000 board feet; two-thirds softwoods and one-third hardwoods. Various oaks make up sixty percent of the latter, the remainder being composed of many species. Softwoods are almost entirely loblolly and shortleaf pines, yet there is a small amount of cedar. Industrial holders own 3,456,000,000 board feet, farmers 773,000,000 board feet, while federal and state sawtimber is but a small balance.

There is a considerable volume of cordwood in Oklahoma, estimated at 9,864,000 cords, of which 7,000,000 are hardwoods. How well this growing stock is managed will depend upon the vigor and skill with which state and other public foresters extend and carry out their functions of education and woodland owner assistance. A small yet promising start has been made in a colossal job. Possibly most promising among new developments is the establishment of a department of forestry in the Agricultural and Mechanical College at Stillwater. Young Oklahomans thus are offered an opportunity to study forestry and related subjects during a four-year course, under a man, Glenn Durrell, who was very active as state forester for eight years. The first class was accepted last year—in autumn of 1947.

Give Me a Slow Hound . . .

(*From page* 549)

all-out fight for survival.

All of these factors give the hound confidence.

The average run-of-the-kennel hound is seldom a purebred. He's just plain hound dog. He has a voracious appetite and his major mission in life is to chase rabbits—to trail them around in a circle where his master and his companions can shoot them. To teach him the simple things an honest bird dog assimilates in stride is almost impossible. Teach a hound to heel, to lie down, to come obediently when called, to retrieve—well, when you once try such things you realize the limitations of the average hound.

But, if he's a lazy creature, if he's deliberate when he starts on the trail of Brer Rabbit, then you know he is superlative. He plays an important part in a game where his rewards are a few words of praise from an appreciative master. Don't ask too much of him.

I've known a very few superlative rabbit hounds in my life. They have ranged from eager beagles up to long-legged, flop-eared awkward hounds of dubious background. The dogs I remember pleasantly were specialists. They weren't worth a two-penny damn when it came to hunting squirrels; a fox would baffle and perplex them to a point where they were sheer idiots. They were interested in coons, but no good in the field.

But place them on a fresh rabbit trail and they were superb. They had the voice of angels—their baying was a delight to the ears. Their pace was so sedate that the rabbit invariably played ahead of them, became a fairly easy mark.

Ever and anon he'll encounter a skunk. When this happens, he drops his reserve and goes berserk. He slinks home, smelling to high heaven and leering slightly. His heart is broken at these times when his master treats him as an utter stranger, keeps him at a distance and refuses to invite him into the comfort of the home or camp. He sulks, his sensitive soul bruised by such neglect. Only age will teach him that skunks and porcupines are to be avoided. Bitter experience alone will drive these lessons home.

What's a good hound worth? I wouldn't know. But there are times when he is a pearl beyond price, a precious asset, something to boast about.

Can a hound be taught to trail a rabbit at a leisurely pace? I doubt it, because the dog can't be taught to do something that's foreign to his natural trend. He's either fast on his feet—or blessedly lazy.

His appearance can't be standardized. He isn't especially bright. You won't be able to teach him tricks. He may kill chickens, suck eggs, kill cats and snarl at children. But if he's a slow dog, blessed with a glorious voice, then you can and will forgive him.

If he has these desirable characteristics he's a valuable dog and he will pay rich dividends with each hunting season.

Old Sandy was such a hound. He made it possible for us to have a fine and productive day. We quit early, a little tired but happy about the size of our bag. The warmth of the cabin was grateful and Sandy was fed bountifully. He ate, stretched out in front of the fire and started to snore in a very sincere manner.

I cleaned two of the youngest rabbits and soaked them in salt water for half an hour. In the meantime, I put plenty of ham fat on the bottom of a heavy iron skillet and covered it with sliced onions and sauerkraut. While this was cooking over a low fire, the two rabbits which had been cut into serving pieces were lightly parboiled. I drained them, rolled the pieces in seasoned flour and seared them in bacon fat until browned; they were then placed in the skillet, which went into a hot oven until the meat was tender. A half hour before serving, I poured in a cup of sour cream.

We had baked potatoes, hot bis-

cuits and a whacking big bowl of fresh watercress salad, crisp and spicy, right from the spring close to the cabin. There was a big pot of coffee, some canned fruit and store cookies.

It had been a satisfactory day. Every element had been right. The baked rabbit, brown, tender and flavorsome, was the final dividend. The slow hound, good old Sandy, snored blissfully before the fire. Like us, he was tired, happy and full of good food.

Jeffrey put down his pipe and yawned prodigiously. He pointed to Sandy.

"I think he has the right idea," he remarked thoughtfully, shedding his slippers.

He was in bed fully thirty seconds before I snuggled down under my blankets and listened to the wind whispering around the little cabin.

Fire Control—Citizen Style

(*From page* 551)

last spring by putting out a grass fire which was about to set its transmitter station ablaze.

Reagan's wife, Billie, takes over the dispatching chore as soon as she is called. The volunteers in turn drop everything as soon as they are notified. They have even used stop watches to time their speed of arrival at the fire. They report times of six to eleven minutes, depending upon the distance they have to travel.

If plane reconnaissance is needed, a phone call to the airport results in the L-4 being airborne in a matter of minutes.

It's a well-knit organization. The volunteers know what to do when they get to a fire. Many took advantage of training offered by the Texas Forest Service, and they can argue at length the wisdom of the direct or indirect attack, the proper way to wield a hoe rake or wet tow sack. They couldn't be better trained or more conscientious if they were being paid for their services.

"We have had a number of requests from groups in other cities to tell them how we operate," Reagan reports. "In fact, we are responsible for organization of the South Camp County Fire Protection Association. Henderson and Huntsville have also asked us for help. The system is simple. It will work anywhere. We have a little bulletin on the organization for other towns that are interested."

There's a lot of truth in what Reagan says. But you can't help but feel that Palestine is fortunate in having leaders of such caliber. Take Reagan himself. He serves as secretary of the Texas Dogwood Trails Association and as Anderson County's chairman of the Texas Forestry Association, in addition to his duties as CAP forest group commander. Then there's Ed Bigbee, busy insurance man who captains Company A. He also doubles as vice-president of the Dogwood Trails Association. So it goes, throughout the organization.

But as Reagan says, "It will work anywhere." Maybe it will work in your community.

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THE AMERICAN FORESTRY ASSOCIATION

919 SEVENTEENTH STREET, N.W., WASHINGTON 6, D. C.

The Purpose

The American Forestry Association is a national organization—educational in character—for the advancement of the intelligent management and use of the country's forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is (1) to bring about adequate protection and perpetuation of these resources by creating an enlightened public appreciation of the need of conserving them through wise use for the present and future welfare and enjoyment of all the people; (2) to make available to Americans in all walks of life a wider knowledge and appreciation of their forest resources and the part they can play in the social and industrial life of our nation.

The History MORE THAN half a century ago American men and women of vision, stirred by the rapid destruction of forests and forest life in the United States, began to raise their voices in behalf of conservation. Foreseeing the danger of allowing America's rich forests and vast natural wealth to be thoughtlessly wasted, these public-spirited individuals protested the needless destruction that was taking place. Out of their efforts came a collective force—The American Forestry Association, first organized in 1875 and made a national influence in 1882.

The Record THUS The American Forestry Association has a long record of efficient public service. The establishment of the United States Forest Service and the creation of the nationwide system of state and national forests and parks were due in no small part to the Association's efforts. Its educational work, extending over more than seventy years, has stimulated public action and built public support for protection against forest fires and floods; for prevention and control of soil erosion; for the development of conservation policies in forest management for continuous production through wise use; for the control of forest insects and diseases and the preservation of fish and wildlife.

The Support FROM AN ORGANIZATION of a few hundred members a half century ago, the Association has attained a substantial membership of many thousand men and women, living in every state of the Union and in foreign countries throughout the world. The funds of the Association are administered by a Board of Directors composed of individuals of national standing—men and women who give their services free, who have a practical understanding of the nation's present-day conservation needs, and are equipped through experience, ability, enthusiasm and training to advance the Association's program.

The Program BECAUSE OF its independent, non-political character, the work of The American Forestry Association is vitally necessary in the field of public service. It provides an unprejudiced influence for the development of sound conservation measures. It helps coordinate public, state and federal policies. It cooperates closely with federal, state and private agencies in conservation work. At the same time it initiates, sponsors and carries on needed projects in conservation in addition to its regular broad continuous program of education.

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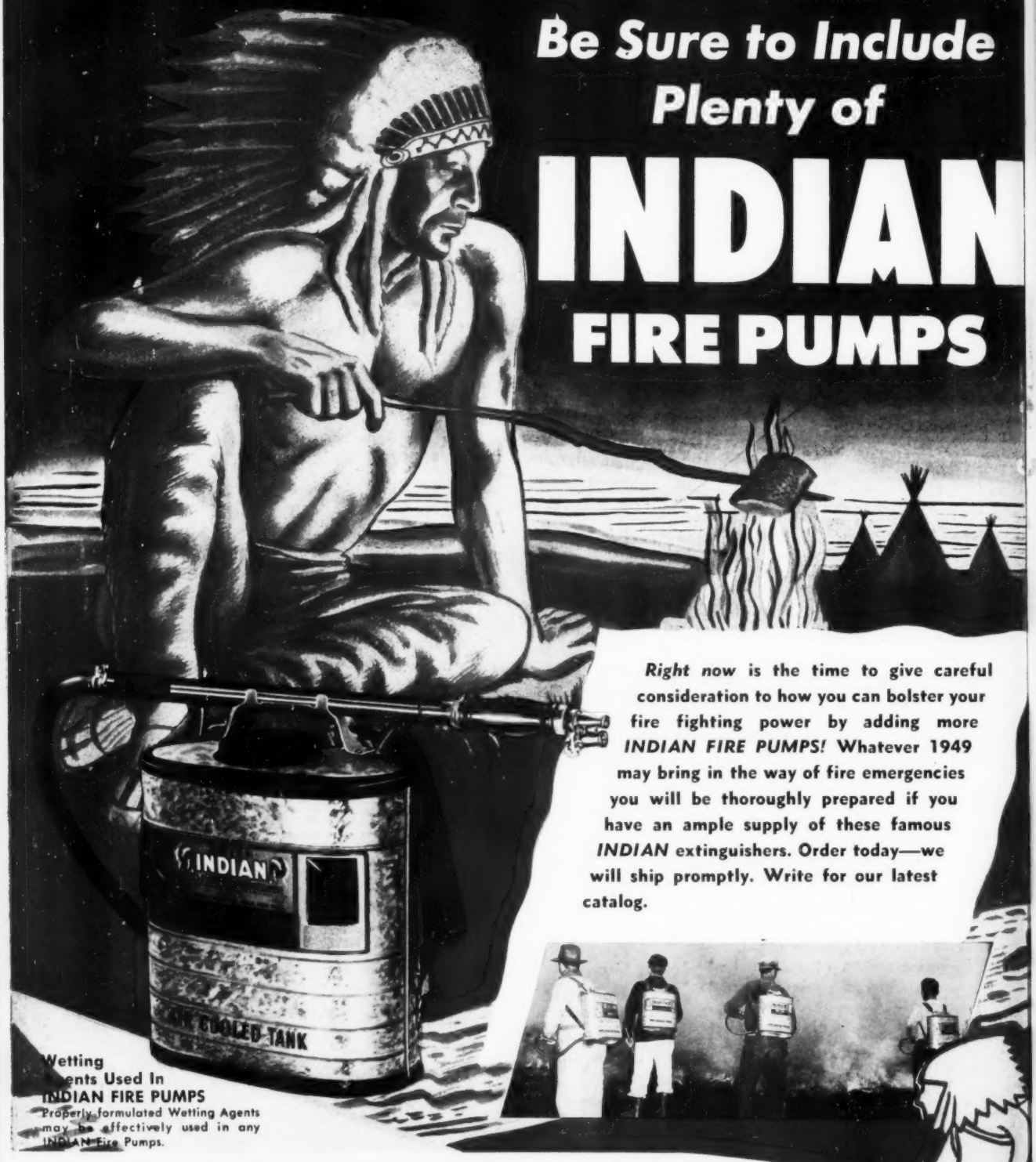

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